USM

University Of Southern Mississippi

BULLETIN

GRADUATE PROGRAMS 1973-1974

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VOLUME 61 JULY 1, 1973 NUMBER 1

UNIVERSITY OF SOUTHERN MISSISSIPPI BULLETIN

GRADUATE PROGRAMS 1973-1974

FALL QUARTER OPENS SEPTEMBER 3, 1973

Published Quarterly by the University of Southern Mississippi, Hattiesburg, Mississippi. Entered as second-class matter February 19, 1917, at the Post Office at Hattiesburg, Mississippi, under Act of August, 24, 1912.

1973

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CALENDAR

GENERAL CALENDAR 1973 - 1974

FALL QUARTER – 1973

Friday, August 17, 1973
Deadline for making application for admission

Wednesday, August 29
Faculty available for advisement

Thursday and Friday, August 30 and 31
Pre-quarter faculty meetings

Sunday, September 2
Dormitories open

Monday and Tuesday, September 3 and 4
Orientation for freshmen and transfer students

Monday, September 3
Registration by appointment

Tuesday, September 4
Continuation of registration by appointment

Wednesday, September 5
Continuation of registration by appointment
Last day to register without late registration fee
6:30- 8:00 p.m. Monday night classes meet (this week only)
8:30-10:00 p.m. Wednesday night classes meet (this week only)

Thursday, September 6
8:00 a.m. Day classes meet on schedule
1:00 p.m. Change of schedule and late registration begin
6:30- 8:00 p.m. Tuesday night classes meet (this week only)
8:30-10:00 p.m. Thursday night classes meet (this week only)

Saturday, September 8
Tuesday class periods A-E meet

Thursday, September 13
Last day for registering or adding full term Fall Quarter courses

Thursday, September 20
English Proficiency Test

Thursday, October 4
Last day for dropping courses without academic penalty

Saturday, October 13
Graduate School Foreign Language Tests

Monday, October 15
Beginning of second term of Fall Quarter--only date for adding or registering for second term courses
Deadline for submitting applications to School of Nursing

Saturday, October 27
Graduate Record Examinations

Friday, November 9
Last day of regularly scheduled classes

Monday, Tuesday, Wednesday, November 12, 13, 14
Fall Quarter Examinations (night classes will meet through Thursday, November 15, 1973)

Wednesday, November 14
Last day to file application for Winter Quarter degree completion

WINTER QUARTER – 1973-1974

Tuesday, November 6, 1973
Deadline for making application for admission

Monday November 26
Registration by appointment

Tuesday, November 27
Continuation of registration by appointment

Wednesday, November 28
Continuation of registration by appointment
Last day of registration without late fee
6:30- 8:00 p.m. Monday night classes meet (this week only)
8:30-10:00 p.m. Wednesday night classes meet (this week only)

Thursday, November 29
8:00 a.m. Day classes meet on schedule
1:00 p.m. Change of schedule and late registration begin
6:30- 8:00 p.m. Tuesday night classes meet (this week only)
8:30-10:00 p.m. Thursday night classes meet (this week only)

Thursday, December 6
Last day for registering or adding full term Winter Quarter courses

Saturday, December 8
Graduate Record Examinations

Thursday, December 13
English Proficiency Test

Wednesday, December 19
10:00 p.m. Christmas holidays begin (night classes meet)

Thursday, January 3, 1974
8:00 a.m. Class work resumes (night classes meet)

Thursday, January 10
Last day for dropping courses without academic penalty

SECOND TERM

Wednesday, January 16
Beginning of second term of Winter Quarter–only date for adding or registering for second term courses
Deadline for submitting applications to School of Nursing

Saturday, January 19
Graduate Record Examinations

Saturday, February 2
Graduate School Foreign Language Tests

Friday, February 15
Last day of regularly scheduled classes

Monday, Tuesday, Wednesday, February 18, 19, 20
Winter Quarter Examinations (night classes will meet through Thursday, February 21, 1974)

Wednesday, February 20
Last day to file application for May graduation

SPRING QUARTER – 1974

Tuesday, February 12, 1974
Deadline for making application for admission

Monday, March 4
Registration by appointment

Tuesday, March 5
Continuation of registration by appointment

Wednesday, March 6
Continuation of registration by appointment
Last day to register without late fee
6:30- 8:00 p.m. Monday night classes meet (this week only)
8:30-10:00 p.m. Wednesday night classes meet (this week only)

Thursday, March 7
8:00 a.m. Day classes meet on schedule
1:00 p.m. Change of schedule and late registration begins
6:30- 8:00 p.m. Tuesday night classes meet (this week only)
8:30-10:00 p.m. Thursday night classes meet (this week only)

Thursday, March 14
Last day for registering or adding full term Spring Quarter courses

Thursday, March 21
English Proficiency Test

Saturday, March 30
University of Southern Mississippi Day

Thursday, April 4
Last day for dropping courses without academic penalty

Thursday, April 11
10:00 p.m. Easter holidays begin (night classes will meet)

Monday, April 15
Monday night classes resume

Tuesday, April 16
8:00 a.m. Regular class work resumes
Beginning of second term of Spring Quarter–only date for adding or registering for second term courses
Deadline for submitting applications to School of Nursing

Wednesday, April 17
Last day to present signed dissertations to Graduate Office for May graduation

Saturday, April 20
Graduate School Foreign Language Tests

Saturday, April 27
Graduate Record Examinations

Friday, May 17
Last day of regularly scheduled classes
Last day to present signed thesis to Graduate Office for May graduation

Monday, Tuesday, Wednesday, May 20, 21, 22
Spring Quarter Examinations (night classes will not meet)

Wednesday, May 22
7:30 p.m. Graduation Exercises
Last day to file application for August graduation

SUMMER QUARTER – 1974

Tuesday, May 14, 1974
- Deadline for making application for admission

Monday, June 3
- Orientation for freshman and transfer students
- Registration by appointment

Tuesday, June 4
- Continuation of registration by appointment
- Only day to register for full quarter or first term courses without late fee

Wednesday, June 5
- 8:00 a.m. Day classes meet on schedule
- 1:00 p.m. Change of schedule and late registration begin
- 6:30- 8:00 p.m. Monday night classes meet (this week only)
- 8:30-10:00 p.m. Wednesday night classes meet (this week only)

Thursday, June 6
- 6:30- 8:00 p.m. Tuesday night classes meet (this week only)
- 8:30-10:00 p.m. Thursday night classes meet (this week only)

Friday, June 7
- Last day for registering or adding first term courses

Saturday, June 8
- Tuesday class periods A-E meet

Wednesday, June 12
- Last day for registering or adding full quarter courses
- Last day for dropping first term courses

Saturday, June 15
- Graduate Record Examinations

Thursday, June 20
- English Proficiency Test

Friday, June 21
- Last day for dropping full quarter courses without academic penalty
- Deadline for making application for admission for the second term of the Summer Quarter

Monday, July 8
- Registration for second term of Summer Quarter
- Second term courses may be added without change of schedule fee
- Deadline for submitting applications to School of Nursing

Wednesday, July 10
- Last day for registering or adding second term courses

Monday, July 15
- Last day for dropping second term courses

Wednesday, July 17
- Last day to present signed dissertations to Graduate Office for August graduation

Saturday, July 27
- Graduate School Foreign Language Tests

Friday, August 9
- Last day of regularly scheduled classes
- Last day to present signed thesis to Graduate Office for August graduation

Monday, Tuesday, Wednesday, August 12, 13, 14
- Summer Quarter Examinations (night classes will not meet)

Wednesday, August 14
- 7:30 p.m. Graduation Exercises
- Last day to file application for Fall degree completion

PART ONE

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THE GRADUATE COUNCIL

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THE GRADUATE SCHOOL

THE GRADUATE SCHOOL

The Graduate School at the University of Southern Mississippi was established in 1947 to recognize the University's growing responsibilities as a center of higher learning, and to provide an academic environment in which advanced research and free inquiry could develop to the advantage of both the student and the State. In the years since 1947, the University's graduate programs have developed logically on the growing points of strong undergraduate schools and departments to meet the needs for professional competence beyond the academic measure of the baccalaureate degree.

In response to the need to offer graduate programs beyond the boundaries of the Hattiesburg campus, the Board of Trustees in 1972 authorized the University to grant graduate degrees on the campuses at the University of Southern Mississippi–Gulf Park and the University of Southern Mississippi–Natchez. Course work taken at the Hattiesburg, Gulf Park, and Natchez campuses is considered as campus work.

The Graduate School's Place Within the University Structure

The Graduate School is administered by a dean executing policies determined by the Graduate Council of which the Dean of the Graduate School serves as chairman.

The present composition of the Graduate Council (see Part I) includes the Dean of the Graduate School as chairman with two representatives from the College of Education and Psychology and one representative each from the College of Liberal Arts, the College of Science, the School of Business Administration, the School of Fine Arts, the School of Health, Physical Education, and Recreation, and the School of Home Economics. Council members are appointed by the President of the University upon the recommendation of the Dean of the University. Permanent **ex officio** members are the President of the University and the University Librarian. The University Registrar serves as secretary to the Council.

The responsibilities of the Graduate Council, representing both administration and faculty, include:

1. Determining policies of admission to the Graduate School.
2. Considering and approving graduate programs submitted to the Council through curriculum committees of each college and school.
3. Electing members of the Graduate Faculty upon recommendation by the academic deans.
4. Approving new courses and deleting courses for graduate credit.
5. Acting upon any other problems affecting graduate programs.

The graduate programs approved by the Council are carried out through the Graduate Faculty (see Part VII of this **Bulletin**) in each degree-granting college or school of the University's academic organization.

DEGREE PROGRAMS OFFERED

The University of Southern Mississippi offers graduate level programs in nearly every recognized academic discipline. In addition, master's degrees are now offered at USM–Gulf Park in general elementary education, selected minor areas of secondary education, and a Master of Business Administration degree with a field of emphasis in management. Master's degrees are now offered at USM–Natchez in general elementary education and selected minor areas of secondary education. Even those departments not yet ready to offer master's or doctoral degrees are usually equipped to offer a graduate minor.

The degrees which are offered and their fields are listed below.

DOCTOR OF PHILOSOPHY

Audiology
Biology
Chemistry
Communication
Comparative Literature
Counseling and Guidance
Early Childhood Education
Educational Administration
Elementary Education
English
Geography
Guidance
Health, Physical Education, and Recreation
Higher Education
History
Microbiology
Music Education
Political Science
Polymer Science
Psychology (Clinical)
Psychology (Developmental)
Psychology (Experimental)
Psychology (General)
Reading
School Psychology
Science Education
Secondary Education
Special Education
Speech and Hearing Sciences
Speech Pathology

DOCTOR OF EDUCATION

Counseling and Guidance
Early Childhood Education
Educational Administration
Elementary Education
Guidance
Health, Physical Education, and Recreation
Higher Education
Mathematics
Reading
Secondary Education
Science Education
Special Education

DOCTOR OF MUSIC EDUCATION

Music Education

MASTER OF PHILOSOPHY

Audiology
Biology
Chemistry
Communication
History
Microbiology
Political Science
Polymer Science

Comparative Literature
English
Geography
Science Education
Speech and Hearing Sciences
Speech Pathology

SPECIALIST'S DEGREE

Business Education
Counseling and Guidance
Curriculum and Supervision
Early Childhood Education
Educational Administration
Educational Research
Elementary Education
Reading
School Counseling
Science Education
Secondary Education
Special Education

MASTER OF ART EDUCATION

Art Education

MASTER OF ARTS

American Literature
Audiology
Biology
Chemistry
Communication
Comparative Literature
Economics
English
English Literature
French
Geography
Geology
German
History
Language Disorders
Latin American Studies
Library Science
Linguistics
Mathematics
Philosophy
Physics
Political Science
Professional Psychology
Public Address
Science Education
Social Studies
Sociology
Spanish
Speech and Hearing Sciences
Speech Pathology
Theatre Arts

MASTER OF BUSINESS ADMINISTRATION

Accounting
Economics
Finance
Management
Marketing

MASTER OF EDUCATION

Biology
Business Education
Early Childhood Education
Educational Administration
Educational Media and Technology
Mathematics
Mental Retardation
Physically Handicapped
School Counseling
Science Education

Elementary Education
Emotionally Disturbed
Geology
Gifted and Creative
Learning Disabilities
Secondary Education
Speech and Hearing Sciences
Supervision of Instruction
Visually Handicapped

MASTER OF FINE ARTS

Theatre Arts

MASTER OF MUSIC

Church Music
Conducting
Jazz
Music History and Literature
Organ
Piano
String
Theory-Composition
Voice
Wind

MASTER OF MUSIC EDUCATION

Music Education

MASTER OF SCIENCE

American Literature
Accounting
Audiology
Biology
Business Education
Chemistry
Child Development
Clothing and Textiles
Clothing Merchandising
College Counseling
Communication
Community Counseling
Economics
English
English Literature
Food and Nutrition
French
Geography
Geology
German
Health Education
History
Home Economics
Industrial Arts
Institution Management
Language Disorders
Library Science
Linguistics
Marriage and Family Life
Mathematics
Medical Technology
Microbiology
Physical Education
Physics
Political Science
Polymer Science
Professional Psychology
Public Address
Reading
Recreation
Science Education
Secondary Education
Social Studies
Spanish
Speech and Hearing Sciences
Speech Pathology
Vocational Technical Education

PART THREE

ADMISSION REQUIREMENTS AND PROCEDURES

FINANCIAL INFORMATION

ADMISSION REQUIREMENTS AND PROCEDURES

Since applicants must always be admitted to a specific program within the Graduate School, all applications for admission to the Graduate School are closely reviewed and must be approved by the chairman of the department in which the student intends to study, by the school or college dean, and by the Graduate Dean. Admission forms are procurable from and should be submitted to the University Admissions Office.

The aptitude phase (verbal and quantitative sections) of the Graduate Record Examinations is required of all applicants to the Graduate School except in the School of Business Administration which requires the Admission Test for Graduate Study in Business. Prospective students should plan to take the appropriate examination, given several times a year at a number of university testing centers, early in their senior year and request that a copy of their scores be sent to the Graduate Office.

The academic record, character, and conditions of application of the applicant must be in accordance with the rules and regulations of the Board of Trustees of State Institutions of Higher Learning and with the laws of the State of Mississippi. The applicant must have excellent moral character in conformity with the generally accepted standards customarily in effect in the University.

The University reserves the right to cancel the admission or registration of an individual whose attendance at the University, in the opinion of the appropriate administrative officer and the President, would not be mutually beneficial to himself and to the institution.

It should be clearly understood that the admission requirements listed below represent the minimal standards set by the Graduate Council and that additional requirements and higher standards may well be stipulated by the various department chairmen.

TYPES OF ADMISSION TO MASTER'S PROGRAMS

I. Regular Admission:

A. The applicant must hold a baccalaureate degree from an institution approved by a recognized accrediting agency.

B. The applicant must be eligible to re-enter in good standing the last college or university he attended.

C. The applicant must present evidence, by official transcript (two copies), of a grade point average of at least 2.75 (figured on an A equals 4.0 scale) for the last two years of undergraduate study, and a grade point average of at least 3.0 on undergraduate courses in the field of proposed graduate study. Any exception to this requirement must be cleared with the appropriate department chairman, the dean concerned, and the Graduate Dean.

D. The applicant must present an acceptable test score on the aptitude

sections of the Graduate Record Examinations or the Admission Test for Graduate Study in Business applicable to the program into which he seeks admission. Test score requirements vary between departments and some require the advanced section of the Graduate Record Examinations. Consult specific departmental requirements for this information.

E. The appropriate department chairman, the school or college dean, and the Graduate Dean must be satisfied that the applicant shows promise of satisfying graduate degree requirements.

II. Conditional Admission:

A student who does not meet the minimum admission standards for either grade-point average or Graduate Record Examinations or the Admission Test for Graduate Study in Business may be admitted on a conditional basis in one of two ways:

A. He must present a score on the aptitude sections of the Graduate Record Examinations or Admission Test for Graduate Study in Business equal to or above that specified for the graduate program into which admission is requested, and a grade point average no lower than 2.5.

B. He must present a grade point average of 2.75 or above if his score is lower than that specified for the program into which admission is desired.

Conditional admission can be given only upon the specific recommendation of the department chairman, the school or college dean, and the Graduate Dean.

A conditional graduate student must meet the following conditions if he is to continue in the Graduate School:

A. If his first enrollment is as a full-time student, he must make grades of B or better on each graduate course attempted during the first quarter.

B. If his first enrollment is as a part-time student, he must makes grades of B or better on his first nine (9) semester hours, or grades of B or better on all courses taken while completing the nine-hour requirement.

All courses taken to remove conditional admission must be taken on a campus of the University of Southern Mississippi. Upon the recommendation of the department chairman and the Graduate Dean, the conditional admission may be removed and the student reclassified as a regular student.

III. Special Graduate Student:

Admission as a special graduate student may be granted a student for any of the following reasons:

A. He cannot meet requirements for conditional or regular admission. If he has not taken the Graduate Record Examinations or the Admission Test for Graduate Study in Business, he must take the

examination during the quarter special admission is granted or remain classified indefinitely as a special graduate student. To become a degree-seeking student, he must meet the grade point average and Graduate Record Examinations or Admission for Graduate Study in Business requirements for regular or conditional admission. No more than nine (9) semester hours earned while classified as a special graduate student may be applied toward a graduate degree at the University of Southern Mississippi.

B. He may or may not be able to meet admission requirements, but does not desire to work toward a graduate degree.

C. He is enrolled in another graduate school and desires to take work at the University of Southern Mississippi to be transferred to the graduate school in which he is seeking a degree.

A special graduate student must hold a baccalaureate degree from an accredited institution.

Special graduate students desiring to enroll on a campus of the University of Southern Mississippi will be expected to file an application for admission by the appropriate deadline.

Students may be admitted as special graduate students to the School of Business Administration only if they have undergraduate grade point averages of 2.75 or above.

A graduate student of any classification may count a total of **no more than nine (9) semester hours of extension work, transfer work, resident center work, and special graduate work toward a master's degree.**

TYPES OF ADMISSION TO ADVANCED GRADUATE STUDY

Three advanced level programs are available for students who hold a master's degree and who wish to do additional graduate work. The first of these programs leads to the Educational Specialist's degree, the second to the Master of Philosophy degree, and the third to the various doctoral degrees.

I. Regular Admission:

For regular admission to advanced graduate study, a student must present a grade point average no lower than 3.25 for the Specialist's and the Master of Philosophy programs or 3.50 for the doctoral program on previous graduate work and an acceptable test score on the aptitude phase of the Graduate Record Examinations for the degree program for which he seeks admission.

II. Conditional Admission:

For conditional admission to advanced graduate study a student must present either (a) a grade point average of between 3.00 and 3.25 for the Specialist's and the Master of Philosophy programs or 3.25 and 3.50 for the doctoral program on previous graduate work and an acceptable Graduate Record Examinations score or (b) a grade point average no lower than 3.25 for the Specialist's and the Master of Philosophy programs or 3.50 for the doctoral

program if the Graduate Record Examinations score does not meet the acceptable score for regular admission.

Conditional status at the advanced graduate level may be removed on the recommendation of the department chairman provided the student has attained a grade point average of at least 3.25 on the first nine (9) semester hours of course work numbered 600 or above or on all courses taken while completing this requirement.

To be admitted to advanced graduate study, the student must submit a formal application through the Admissions Office even though he may have successfully completed a master's degree program at the University of Southern Mississippi. Acceptance as an advanced graduate student is contingent upon the approval of the department chairman, the school or college dean, and the Graduate Dean.

III. Special Graduate Student:

An applicant for advanced study may be admitted as a special graduate student under the same conditions outlined for a master's degree applicant.

Limitations on University Faculty Members

Members of the faculty of the University of Southern Mississippi above the rank of instructor cannot become candidates for a doctoral degree at this institution. They may, however, enroll for graduate courses. Faculty members of the rank of instructor may become candidates for doctoral degrees at the University of Southern Mississippi on the same terms as any other advanced graduate student candidate.

PROCEDURES FOR APPLYING FOR ADMISSION

I. Application materials are available from the Director of Admissions, Southern Station, Box 11, Hattiesburg, Mississippi 39401.

II. All credentials (application, recommendations, two official transcripts from each institution attended) must be submitted to the Director of Admissions by the deadline published in the University Calendar.

III. **After all credentials are received, the Admissions Office will compute the applicant's grade point average and will forward the application and transcripts to the appropriate department chairman, school or college dean, and the Graduate Dean.** As soon as the application has been processed by the department chairman, the school or college dean concerned, and the Graduate Dean, the Director of Admissions will notify the applicant of the University's decision on his request for admission.

Permission for Undergraduate Seniors to Register for Graduate Credit

Exceptionally well qualified undergraduate students at the University of

Southern Mississippi may apply to the Graduate Office for permission to take course work for graduate credit if they are within six (6) semester hours of meeting bachelor's degree requirements as certified by the Registrar. If the Graduate Dean approves, the student may then register for graduate courses up to a maximum of six (6) semester hours of graduate credit with a total course load not exceeding twelve (12) semester hours. The student must complete requirements for the baccalaureate degree within the first quarter in which he registers for graduate courses. The student's application for admission to the Graduate School will not be given final approval until after he satisfies all requirements for the baccalaureate degree.

STUDENT EXPENSES

The University of Southern Mississippi is supported chiefly by legislative appropriations. Increases in student fees are put into effect only when public support funds are inadequate and no other resources are available; therefore **the University must reserve the right to increase or modify fees and expenses without prior notice but with approval of the Board of Trustees of State Institutions of Higher Learning.**

Fees and expenses are in the form of incidental fees, room and board, and special fees.

INCIDENTAL FEE. This fee, together with the allocation from the legislative appropriation, is used for general support of the University.

Athletic activities, health service, and UAC programs are not included for part-time students.

Full-time students for purposes of assessing fees are as follows: Graduate School, seven (7) or more semester hours; all other schools and colleges, nine (9) or more semester hours. Graduate students enrolled for more than thirteen (13) semester hours and undergraduate students enrolled for more than fourteen (14) semester hours will be assessed the applicable fee for each additional semester hours. (Students training under Veterans Administration programs are required to carry a minimum number of semester hours for the entire quarter to receive full subsistence. The requirements are seven (7) semester hours on the graduate level and nine (9) semester hours on the undergraduate level.)

Clinical and hospital services covered by the health service charge included in the incidental fee are limited to cases of ordinary illness. Services are provided within the limits of the professional, technical, and physical resources of the Clinic. The University does not assume responsibility in cases of extended illness or for the treatment of chronic diseases. Cases requiring surgery must be handled by a physician and hospital of the student's choice.

ROOM AND BOARD. The room and board fees are assessed for all students living in University-controlled dormitories and those students living in fraternity houses. All students rooming in dormitories or fraternity houses are required to take their meals in the University Commons. Students living in Elam Arms and Hillcrest will eat in the cafeterias in those residence halls.

A room deposit of $15.00 is payable in advance for the reservation of space in the dormitories. This amount is held as a breakage deposit until a student withdraws from the dormitory.

A student accepting dormitory space will be financially obligated to pay a full quarter's room rent. A refund of the dormitory fee will be made only upon withdrawal from the University.

OTHER FINANCIAL INFORMATION. Fees of all students are due and payable at time of registration; however, fees of students enrolled for six semester hours or more may be paid one-half upon entrance and the balance one week prior to the beginning of the second half of the quarter. This procedure applies on campus and at branch and resident center locations only.

The University reserves the right to withhold readmission to a student until all delinquent accounts have been paid. Transcripts of credits will not be issued for students whose accounts are delinquent.

Fines accumulated as a result of failure to adhere to the established procedures of the University, such as Library and Security regulations, or any other policy establishing regulations for the protection of University property shall become collectible by the Business Office, and if not collected shall constitute a delinquent account.

Students whose checks for registration are returned will be assessed the late registration fee of $10.00.

A fee of $2.00 for operation of the University Union is included in the fees of all full-time students. A $1.00 fee is added to the incidental fee assessment of part-time students.

Courses requiring special fees and music fees are shown in the Special Fee listing (Table II).

A fee of $6.50 for **The Southerner** (University annual) is payable each school year by all full-time undergraduate students.

NON-RESIDENT STATUS. The Legislature of the State of Mississippi has passed the following legislation concerning non-resident status:

The board of trustees of each junior college in this state, the board of trustees of state institutions of higher learning, and the administrative authorities of each institution governed by said boards, in ascertaining and determining the legal residence of and tuition to be charged any student applying for admission to such institutions, shall be governed by the following definitions and conditions:

Legal residence of a minor. The residence of a person less than twenty-one (21) years of age is that of the father. After the death of the father, the residence of the minor is that of the mother. If the parents are divorced, the residence of the minor is that of the parent who was granted custody by the court; or, if custody was not granted, the residence continues to be that of the father. If both parents are dead, the residence of the minor is that of the last surviving parent at the time of the parent's death, unless the minor lives with a legal guardian of his person, duly appointed by a proper court of Mississippi, in which case his residence becomes that of the guardian.

Legal residence of an adult. The residence of an adult is that place where

he is domiciled, that is, the place where he actually physically resides with the intention of remaining there indefinitely or of returning there permanently when temporarily absent.

Removal of parents from Mississippi. If the parents of a minor who is enrolled as a student in an institution of higher learning move their legal residence from the State of Mississippi, the minor is immediately classified as a non-resident student.

Twelve months of residence required. No student may be admitted to any institution of higher learning as a resident of Mississippi unless his residence, as defined hereinabove, has been in the State of Mississippi for a continuous period of at least twelve (12) months immediately preceding his admission.

Residence in an education institution not counted. A person who has entered the State of Mississippi from another state and enters an educational institution within twelve (12) months is considered a non-resident. For this reason, any period of time when such a person is enrolled in any educational institution in Mississippi may not be counted as any part of the twelve (12) months prerequisite to his admission to an institution of higher learning as a resident student. Even though he may have been legally adopted by a resident of Mississippi, or may have been a qualified voter, or a landowner, or may otherwise have sought to establish legal residence, such a person will still be considered as being a non-resident of Mississippi if he has entered this state for the purpose of enrolling in an educational institution.

Residence status of a married woman. A married woman may claim the residence status of her husband, or she may claim independent residence status under the same regulations, set forth above, an any other adult.

Children of parents who are employed by institutions of higher learning. Children of parents who are members of the faculty or staff of any institution under the jurisdiction of the board of trustees may be classified as residents during the time that their parents are such faculty or staff members without regard to the residence requirement of twelve (12) months, for the purpose of attendance at the institution where their parents are faculty or staff members.

Military personnel assigned an active duty station in Mississippi. Members of the armed forces on extended active duty and stationed within the State of Mississippi, except those military personnel whose active duty assignment in the State of Mississippi is for educational purposes, may be classified as residents, without regard to the residence requirement of twelve (12) months, for the purpose of attendance of State-supported institutions of higher learning and junior colleges of the State of Mississippi. Resident status of such military personnel who are not legal residents of Mississippi, as defined under "Legal residence of an adult" in paragraph 2 above, shall terminate upon their reassignment for duty in the continental United States outside the State of Mississippi.

Children of military personnel. Resident status of children of members of the Armed Forces on extended active duty shall be that of the military parent for the purpose of attending State-supported institutions of higher learning and

junior colleges of the State of Mississippi during the time that their military parents are stationed within the State of Mississippi and shall be continued through the time that military parents are stationed in an overseas area with last duty assignment with the State of Mississippi, excepting temporary training assignments en route from Mississippi. Resident status of minor children shall terminate upon reassignment under Permanent Change of Station Orders of their military parents for duty in the continental United States outside the State of Mississippi, excepting temporary training assignments en route from Mississippi.

Certification of residence of military personnel. A military person on active duty stationed in Mississippi who wishes to avail himself or his dependents of the provision of paragraph 8, must submit a certificate from his military organization showing the name of the military member; the name of the department, if for a dependent; the name of the organization of assignment and its address (may be in the letterhead); that the military member will be on active duty station in Mississippi on the date of registration at the State-supported institution of higher learning or junior college of the State of Mississippi; that the military member is not on transfer orders; and the signature of the Commanding Officer, the Adjutant, or the Personnel Officer of the unit of assignment with signer's rank and title. A military certificate must be presented to the registrar of the State-supported institution of higher learning or junior college of the State of Mississippi each semester or tri-semester at (or within ten [10] days prior to) registration each semester for the provision of paragraph 8 hereof to be effective.

Aliens. All aliens are classified as non-residents.

Students holding fellowships. Non-resident students holding University financed fellowships will not be required to pay the non-resident fee during the time they hold such appointments.

REFUND POLICY. A student who officially withdraws after enrollment may obtain a refund in accordance with the following:

a. A refund of 80% of incidental and special fees paid will be made to a student who withdraws within the week following the week of registration.

b. A student who withdraws for any reason prior to midterm of any quarter but after the week following the week of registration will be refunded 50% of the incidental and special fees.

c. A student who withdraws after midterm of any quarter will not be entitled to a refund of fees.

d. No adjustment of incidental and special fees will be made when courses are dropped after the week following the week of registration.

e. Room and board fees are refunded on the basis of full weeks remaining in the quarter.

TABLE I
EXPENSES EACH QUARTER
(All fees are subject to change without notice. See Page 24)

FULL-TIME STUDENTS

Fixed Fees

Incidental Fee	$159.00
*Room rent—air-conditioned dormitory	110.00
Room rent—other dormitory	90.00
*Board	105.00

Other Fees When Applicable

Non-resident fee	$200.00
The Southerner	6.50
Post Office box, per quarter	1.25

*Note:

Hillcrest (Room and Board	$260.00
Elam Arms (Room and Board)	260.00
Vann Hall (Room and Board)	235.00
Bolton Hall (Room and Board)	225.00

PART-TIME STUDENTS—Each semester hour**

Incidental fee: graduate student	$24.00
Non-resident fee: graduate student	29.00

**These fees apply on all campuses.

TABLE II
SPECIAL FEES AND EXPENSES

Music Fees—Private Lessons for other than full-time music majors:

1 semester hour per instructor	$19.00 per quarter
2 semester hours per instructor	36.00 per quarter
3 semester hours per instructor	53.00 per quarter
Each additional supervised lesson	17.00 per quarter
Orchestral or Band Instrument rental*	6.00 per quarter

*This fee applies to music majors and minors as well as to other students.

Examinations and Degrees:

Miller Analogies Test	$ 3.50 when applicable
Revalidation Examination	5.00 when applicable
Special Examination	3.00 when applicable
Application for Degree	
Master's	12.00
Specialist's	12.00
Doctoral	90.00
Thesis binding per copy	5.25 when applicable

Extension and Public Service	
Resident Center	
Graduate Course	24.00 per semester hour
Resident Center—Laboratory fee	6.00 per course
Resident Center—Typing fee	5.00 per course
Extension Center	
Graduate Course	24.00 per semester hour
Registration and Records:	
Change of Schedule	5.00 when applicable
Late Registration	10.00
Evaluation Fee for Foreign Students (non-refundable)	10.00 with application
Memorandum of Credits	.50 each
Transcript of Credits	1.00 when applicable

AVAILABLE FINANCIAL ASSISTANCE FOR GRADUATE STUDENTS

At present the University has available some 180 master's and 50 doctoral University fellowships in all areas as well as fellowships provided by federal and private agencies. Though amounts may vary from department to department, University fellowships average $1500 per year at the master's level and $2000 at the doctoral level and entail a teaching or research assignment. To maintain a fellowship, a student must have an average of B or better each quarter. Out-of-state tuition, though not the incidental fee, is currently waived for fellowship holders. The University also currently waives out-of-state tuition for students on sabbatical leave with pay from schools and colleges.

Inquiries regarding fellowships should be directed to the Dean of the Graduate School.

The National Direct Student Loan, College Work-Study Program, and Insured Student Loans, are also available to graduate students. Applicants for Direct Student Loans and College Work-Study program should apply by June 1 for loans and work to begin the fall term. Applications for the National Direct Student Loan, College Work-Study program, and Federally Insured Loan (Mississippi residents) may be secured by writing the Director of Student Aid and Scholarships. Students who reside outside the State of Mississippi should contact their State Department of Education to determine source of Insured Loans used by their state.

PLACEMENT BUREAU

The function of the Placement Bureau is dual in nature. It provides assistance to graduating seniors, graduate students, and alumni in obtaining suitable employment, and to employers in recruiting qualified employees. The services are provided at no cost to the student or to the employer.

Throughout the year, current listings of employment opportunities, both in state and out of state, in teaching, business, industry, and government are made available to the students. Also, on-campus interviews are scheduled with personnel representatives from schools, businesses, industries, and governmental agencies. Students registered with the Bureau are notified of these interview schedules, and all who are interested are given the opportunity for individual interviews.

All seniors should register with the Placement Bureau and establish a confidential placement credential folder during the last quarter of their junior year, or the first quarter of their senior year. Graduate students may register any time they desire. These placement credentials are very valuable to on-campus recruiters and to those who telephone or write for information about prospective employees. After graduation and/or when the registrant has found suitable employment, the placement file is stored and may be quite helpful in later years if a registrant wishes to change employment or to enter graduate school.

PART FOUR

GENERAL ACADEMIC REGULATIONS AND REQUIREMENTS

GENERAL ACADEMIC REQUIREMENTS

It is reasonable to assume that a graduate student accepts full responsibility for knowing the policies and regulations of the Graduate School and the departmental requirements relevant to his individual degree program.

Only the general academic regulations and requirements governing all graduate programs are given below. Specific requirements pertaining to individual degree programs are outlined within the department sections.

Course Work and Grading System

Courses open to graduate students are those numbered 500 or above.

Many courses have certain prerequisites. A student who wishes to register for a particular course must satisfy the department concerned that he has had preparation adequate for admission to the course.

The grading system in the Graduate School is as follows:

A– Indicates that the student's work is of unusually high quality.

B– Indicates that the student's work is of high but not exceptional quality.

C– Indicates that the student has met the minimum requirements for passing the course.

D– Indicates that the student's work is below that which is expected of a graduate student. A course in which the student has earned a grade of D will not apply toward a graduate degree. A student who earns more than six (6) semester hours in grades of D or below may not be considered as a candidate for a degree.

E– Indicates a course in progress.

F– Indicates that the student has failed the course. A student who accumulates more than three (3) semester hours of F grades will not be considered as a candidate for a degree. Retaking a course will not remove this disability.

G– Indicates withdrawal passing.

H– Indicates withdrawal failing.

An average of B or better is required of all candidates for graduate degrees by the time they complete the course-hour requirements for the degree.

In computing averages, a C must be balanced by one A, a D by two A's, and an F by three A's of equal graduate credit.

The one-year limitation for an "Incomplete" to be removed does not apply to theses. The general regulation that degree work must be completed within a six-year period does apply.

Course Loads

1. Although the maximum load of a full-time graduate student is thirteen (13) semester hours, the normal load for a full-time graduate student is

generally considered to be nine (9) semester hours; the normal time required for a master's degree is thus four quarters.

II. The minimum load for a full-time graduate student is seven (7) semester hours for the purpose of living in Pine Haven, using the services of the Clinic, for Selective Service information, and other such requirements.

III. The usual load for a part-time student with a full-time position is three (3) hours. A maximum of six (6) hours may be carried by such a student provided the faculty adviser and department chairman approve. (Teachers should note that the Mississippi State Department of Education allows a full-time teacher to take only three [3] hours per quarter.)

IV. Ten (10) hours is the maximum load for a graduate fellow teaching one undergraduate class or its equivalent. In no case may the total hours involved in a student's program, including both his course work and his fellowship assignment, exceed thirteen (13) hours.

V. The incidental fee for the full load of seven (7) semester hours will be the same amount as paid by graduates for a normal load of nine (9) hours.

VI. The courses numbered 697, and 897 - **Independent Study and Research** - may be taken for any amount of credit with the exception that students who are not in residence but who are actively working on a thesis, research problem, or dissertation and consulting with the major professor or making use of the library or other University facilities must enroll for three (3) semester hours each quarter.

MASTER'S DEGREE REQUIREMENTS

A convenient checklist of master's degree requirements may be procured in the Graduate Office.

I. Credit Hours:

A minimum of thirty (30) semester hours credit is required for any master's degree. Some departments require more than the minimum. Consult specific college and departmental requirements for additional information.

II. Time Limitation:

The student must complete the master's degree within six calendar years from the date of initial enrollment as a graduate student. Six years is the maximum age allowed for graduate credits toward a master's degree. If more than six years are needed to complete requirements, the Graduate Dean, under extenuating circumstances, may revalidate over-age credit hours if the original credit was earned at the University of Southern Mississippi and if the dean of the college or school concerned approves the revalidation. The revalidation is secured by the student's successfully passing a special examination on the course. However, any student who fails to complete his master's degree program within the six-year time period becomes subject to any changes in degree requirements made at any date six years prior to his graduation. The fee charged for the special revalidation examination is $5.00 per course. This fee is to be paid before

the revalidation examination is taken. Over-age extension courses can not be revalidated.

III. **Credit Hour Limitations:**

A. A minimum of twenty-one (21) semester hours must be earned at the University of Southern Mississippi.

B. A minimum of fifty per cent of the credit earned at the University of Southern Mississippi must be taken on the campus from which the degree is awarded.

C. A minimum of eighteen (18) semester hours must be in courses numbered 600 or above. Master of Business Administration degree candidates are permitted to take a maximum of one 500-level course.

D. As many as six (6) semester hours of graduate credit from other accredited institutions may be transferred to the student's program with the approval of the appropriate department chairman and the Graduate Dean provided that the course work transferred falls within the six-year period allowed for the degree.

E. As many as six (6) semester hours of course work taken by extension may be accepted toward the master's degree provided that such courses were taught by a member of the University of Southern Mississippi graduate faculty.

F. However, a student may apply a total of no more than six (6) semester hours by extension and/or transfer toward a master's degree, and, as previously stated, a total of no more than nine (9) semester hours of extension work, transfer work, resident center work, and work earned as a special graduate student may be applied toward a master's degree.

G. No more than nine (9) semester hours earned in institutes may be applied toward a master's degree.

IV. **The Master's Committee:**

The student's work toward the master's degree is supervised by a departmental committee composed of a chairman and two members recommended by the department chairman and appointed by the Graduate Dean.

V. **The Minor Field:**

If a minor field is required in the master's program, it shall consist of twelve (12) semester hours of course work.

VI. **The Master's Thesis:**

Although the degree of Master of Arts usually entails the writing of a thesis, the thesis requirement is optional with the departments for the Master of Science and the Master of Education degrees. Students intending to pursue a degree higher than the master's are encouraged to write a thesis.

A separate bulletin outlining University requirements concerning the preparation of theses is available in the Graduate Office.

VII. Examinations:

A. The aptitude phase of the Graduate Record Examinations or the Admission Test for Graduate Study in Business is required for admission into the Graduate School. Individual departments may require the advanced area tests.

B. The Graduate School Foreign Language Test is required for some master's degrees, particularly the Master of Arts. Languages other than French, German, Spanish, and Russian must be approved by the department chairman and the Graduate Dean. Students may procure the proper registration forms in the Graduate Office.

C. If a master's degree student has not had an English writing proficiency test on the undergraduate junior or senior level, he will be required to take the University English Proficiency Test.

D. In addition to regular course examination, final comprehensive examinations are required for master's degrees. The major department will determine whether the comprehensive examination will be written or oral or both. The written comprehensive, if required, will be prepared by the student's committee and will cover the area of the major field. If an oral examination is required, the chairman of the student's committee will send written notices of the time and place of the examination to the examiners and to the student and will conduct the examination. Comprehensive examinations, whether written or oral, will be administered no later than the last week of the quarter in which the student expects to receive his degree and the results reported by the department chairman to the Registrar and to the Graduate Office no later than the last day for presenting signed theses to the Graduate Office. A student who fails the comprehensive examination may not retake the examination until its next regular administration and may repeat the examination only once.

EDUCATIONAL SPECIALIST'S DEGREE REQUIREMENTS

The Educational Specialist's degree earned in the Departments of Educational Administration and Supervision, Business Education, Curriculum and Instruction, Counseling and Guidance, Research and Human Development, Science Education, and Special Education provides sixth-year programs designed to prepare students for positions in school administration, advanced technical education for business, teacher training, counseling and guidance, and to develop research and evaluation specialists for the public schools. Individual programs and requirements are fully described in the departmental sections of this **Bulletin.**

Students who are seeking the Educational Specialist's degree must meet all degree requirements relating to the master's degree, must earn at least thirty (30) semester hours beyond the master's degree, must write an acceptable thesis and defend it in an oral examination, and must complete one full-time quarter of residence taking all nine (9) semester hours on the Hattiesburg campus.

Credit earned in institutes cannot be applied toward a specialist's degree.

THE MASTER OF PHILOSOPHY DEGREE REQUIREMENTS

The Master of Philosophy (M.Ph.) provides a directed semiterminal degree beyond the master's in a subject area primarily for the benefit of junior college faculties. At present the Southern Association of Colleges and Schools requires that "in all colleges at least forty percent of the teaching faculty should possess professional preparation equivalent to two years of advanced study beyond the bachelor's degree." This degree more than fulfills this requirement and in addition provides an intermediate stepping stone for the student who wishes to pursue the Doctor of Philosophy at a later time.

General Requirements

I. The program consists of a minimum of thirty (30) hours of work beyond the master's degree or sixty (60) semester hours beyond the bachelor's degree in one subject matter area of which no more than four (4) hours can be in thesis research. With departmental permission, a related minor of nine (9) semester hours can be elected. At least one-half of the work in both the major and minor areas must be in courses numbered 600 or above. No more than twelve (12) quarter hours or nine (9) semester hours by extension or transfer can apply to the degree nor is any institute or project credit applicable. Junior college teachers can substitute a course in the philosophy and administration of the junior college for one of their minor area courses.

II. Proficiency in a foreign language or, with departmental permission, in computer science and/or statistics is required unless the student's master program includes such a requirement.

III. One quarter of full-time work on the Hattiesburg campus constitutes the residency requirement for the degree.

IV. A departmental qualifying examination, a thesis of considerable scope, a written comprehensive examination covering the entire discipline, and a final oral examination of the thesis are required.

V. Since the work done for the Master of Philosophy degree is applicable to the Doctor of Philosophy degree, it can be awarded only by departments authorized to grant the Doctor of Philosophy degree, and all departments presently so authorized are permitted to grant the Master of Philosophy. At present, these areas are biology, chemistry, communication, comparative literature, English, history, microbiology, political science, polymer science, science education, and speech and hearing sciences.

Completion of the Doctor of Philosophy Degree

1. In order to achieve the Doctor of Philosophy degree the student holding a Master of Philosophy degree must take at least twenty-four (24) additional hours of course work, of which nine (9) semester hours may be in research leading to the dissertation and of which fifteen (15) must be in courses numbered 600 or above.

2. He must spend three (3) consecutive quarters of full-time study on the Hattiesburg campus in order to fulfill the residency requirement
3. He must achieve proficiency in a second language (or in computer science and/or statistics) if he has not previously done so.
4. He is required to take a rigorous written examination in the specialized area of his discipline in which he plans to write his dissertation.
5. He must write an acceptable dissertation and defend it orally.

DOCTORAL DEGREE REQUIREMENTS

A convenient checklist of doctoral degree requirements may be procured in the Graduate Office.

I. Credit Hours

All doctoral degrees entail a minimum of seventy-eight (78) semester hours of course work beyond the bachelor's degree or forty-eight (48) semester hours of course work beyond the master's degree.

II. Time Limitations:

Courses taken above the master's degree or its equivalent which will fit into the degree program but which are six or more years old at the time of admission to the advanced graduate program may be counted toward meeting degree requirements when recommended by the department chairman and approved by the Graduate Dean.

The degree requirements must be completed within a period of six years after the student has been admitted to advanced graduate standing at the University of Southern Mississippi.

III. Credit Hour Limitations:

A. A minimum of thirty-two (32) semester hours of work beyond the master's degree must be earned on the University's Hattiesburg campus.

B. Transfer of credit for graduate work done at other institutions must be approved by the department chairman and Graduate Dean. Final evaluation of an acceptance of transfer credit will not be made until the student has been in residence for one quarter. Transfer of credit for doctoral degree programs is limited to not more than six (6) semester hours or nine (9) quarter hours beyond the master's degree. Exceptions to this restriction may be made with the approval of the department chairman and the Graduate Dean.

C. No credit earned in institutes can be applied toward a doctoral degree.

D. No more than nine (9) semester hours earned as a special graduate student may be applied toward a doctoral degree.

IV. Residency:

The residence requirement for a doctoral degree consists of three consecutive quarters during which the student devotes his full time to graduate work and so earns a minimum of nine (9) semester hours of credit for each of the three quarters.

A student who holds a fellowship or an assistantship may fulfill this

residence requirement by earning a total of twenty-seven (27) hours of credit during consecutive quarters on the Hattiesburg campus of the University. The summer quarter may be counted in this sequence at the option of the candidate. A student may not fulfill the residency requirements if he is employed in a regular position.

V. **The Doctoral Committee:**
The student's work toward the doctoral degree is supervised by a departmental committee composed of a chairman and four members recommended by the department chairman and appointed by the Graduate Dean.

VI. **The Minor Field:**
If a minor field is required in the doctoral program, it shall consist of twelve (12) semester hours of course work and may consist of courses from a number of related areas.

VII. **Examinations:**

A. The aptitude phase of the Graduate Record Examinations or the Admission Test for Graduate Study in Business is required for admission into the Graduate School Individual departments may require the advanced area tests.

B. The Miller Analogies Test is required of all doctoral students in the College of Education and Psychology.

C. If a doctoral student has not had an English writing proficiency test on either the baccalaureate or master's level, he will be required to take the University English Proficiency Test.

D. The foreign language and statistics requirements for the doctoral degree may be fulfilled in several ways:

1. The Doctor of Education degree does not require foreign language proficiency. However, the student must establish proficiency in statistics or computer science either by examination or by completing a prescribed course sequence, the credit hours for which do not apply toward the degree. Doctor of Music Education students refer to doctoral programs in music education.

2. The Doctor of Philosophy degree requires either (a) proficiency in two languages, (b) proficiency in one language and in statistics or computer science, or (c) proficiency in one language and the completion of a nine-hour minor, the hours for which do not apply toward the degree, or (d) proficiency in statistics and in FORTRAN, COBOL, or other computer programming language suitable to the degree program and research needs of the candidate. Proficiency in a specific computer language is to be certified by examination in that language devised and administered by the Department of Computer Science and Statistics. Languages other than French, German, Spanish, and Russian must be approved by the department chairman and the Graduate Dean. Foreign language proficiency will be accepted from another institution provided the examination was a part of a completed degree program. A student may satisfy the

option of a foreign language by successfully completing at least eleven (11) semester hours (or equivalent proficiency) in an approved foreign language with grades of C or better. The particular option followed by the student must have the approval of the department chairman and the Graduate Dean.

E. All students must take a written and/or oral doctoral qualifying examination in their field, and in the College of Education and Psychology in the **Foundations of Education** as well. This examination should be taken during the first or second quarter of the student's enrollment and is designed both to judge the student's fitness to pursue doctoral work and to guide his advisory committee in planning his program. The qualifying examination may be retaken only once.

F. At the completion of his course work and other examinations, the doctoral student is required to take a written and/or oral comprehensive examination in his major and minor field. If a student does unsatisfactory work on the comprehensive examination, he may be granted a second examination at the next regularly scheduled time, or later. His committee will recommend the conditions to be met before the examination may be repeated. The comprehensive examinations may be retaken only once.

G. After the dissertation has been accepted and after all required course work has been completed, but at least four weeks before the candidate is scheduled to receive his degree, a final oral examination on the dissertation and related fields will be conducted by the student's advisory committee and any other faculty members designated by the Graduate Dean. The examination will be open to any member of the graduate faculty.

VIII. The Dissertation:

A. The dissertation topic must be approved by the student's major professor and advisory committee and must be an original contribution to knowledge in the chosen field.

B. A separate bulletin outlining University requirements concerning the preparation of dissertations is available in the Graduate Office.

C. The student should register for 898 – **Dissertation** – during the quarter in which he defends his dissertation.

IX. Documents:

The doctoral student must file a number of documents with the Graduate Office.

A. After his doctoral committee has been appointed and his qualifying examination completed but before he has passed twenty-seven (27) hours of doctoral course work, he should prepare in conjunction with his adviser a "Doctoral Planning Sheet," one copy of which is to go to each member of his committee and two copies to the Graduate Office.

B. After the student has completed all the requirements for the doctoral degree other than the dissertation but at least two quarters prior to graduation he should file two copies of the "Application for Candidacy" form with the Graduate Office and one copy with his

adviser.

C. The student should present two copies of the "Application for Degree" form, properly stamped by the Business Office, to the Graduate Office during the quarter preceding that of graduation.

D. When completed, the student's file in the Graduate Office should contain in addition to the three documents described above statements from his adviser and/or department chairman appointing his doctoral committee, approving his dissertation prospectus, acknowledging the receipt of a first draft of his dissertation, and verifying the successful completion of his qualifying and comprehensive examinations and dissertation defense. Also contained in his file should be statements of proficiency in language and/or statistics.

PART FIVE

COLLEGE AND SCHOOL REQUIREMENTS

- SCHOOL OF BUSINESS ADMINISTRATION
- COLLEGE OF EDUCATION AND PSYCHOLOGY
- SCHOOL OF FINE ARTS
- SCHOOL OF HEALTH, PHYSICAL EDUCATION, AND RECREATION
- SCHOOL OF HOME ECONOMICS
- COLLEGE OF LIBERAL ARTS
- COLLEGE OF SCIENCE

SCHOOL OF BUSINESS ADMINISTRATION

Joseph A. Greene, Jr., Dean
Howard O. Jackson, Assistant Dean
Henry A. Gottleber, Coordinator of Graduate Studies

DEPARTMENTS AND GRADUATE DEGREE PROGRAMS

The School of Business Administration currently offers the following graduate degree programs: a Master of Business Administration, a Master of Science in Accounting, and a Master of Science or Master of Arts in Economics. The curricular requirements for each of these programs are detailed below.

A prospective student should examine each degree program carefully as to its objective, course content, and prerequisites before deciding which to pursue.

Graduate fellowships are available in each of the departments and the Bureau of Business Research within the School of Business Administration. Students with good undergraduate records are encouraged to apply for fellowships at the time they apply for admission to the Graduate School. The student must have regular graduate status and ordinarily must have achieved a 3.0 average on his last two years of undergraduate work to be eligible.

GRADUATE ADMISSION AND DEGREE REQUIREMENTS

All of the general academic regulations and requirements outlined in Part IV of this **Bulletin** apply to students pursuing graduate work in the School of Business Administration. Regular admission requires a grade point average of at least 2.75 based on the 4.0 scale on the last two years of undergraduate study **and** a minimum score of 450 on the Admission Test for Graduate Study in Business (ATGSB). Special admission may be granted provided the student has the minimum grade point required for regular admission and makes provision to take the ATGSB when next offered. An applicant deficient in grade point average or test scores may be admitted conditionally upon the recommendation of his adviser, the Dean of the School of Business Administration, and the Dean of the Graduate School.

Students taking over fifty (50) per cent of their course work at other than the Hattiesburg campus will be awarded either USM–Gulf Park or USM–Natchez degrees. Admission of students into the Gulf Park and Natchez programs will be approved by their appropriate adviser, the Dean of the School of Business Administration, and the Dean of the Graduate School.

Gulf Park and Natchez courses to be applied to master's degrees in

Business (M.B.A., M.S., or M.A.) must be taught by approved graduate faculty members of the School of Business Administration. Comprehensive examinations will be taken at the Hattiesburg campus with examination committees selected from members of the approved graduate faculty from the School of Business Administration.

DEGREE PROGRAMS IN BUSINESS ADMINISTRATION

Master of Business Administration

The Master of Business Administration program is primarily designed to prepare the student for a position of responsibility in business or industry. However, it is also used as preparatory graduate work for the doctoral degree or for teaching in junior colleges where a teaching certificate is not required. The program is broad in nature and aimed at developing general competence in overall management.

Research reveals that individuals with technical or other specialized degrees frequently discover that, after experiencing initially satisfying careers in their specialties, further promotions require a transition into the managerial area. The M.B.A. program supplements the education of the specialist and should enable him to make the transition more readily. For this reason, the M.B.A. program includes many students with undergraduate degrees in other fields as well as those who majored in business or economics as undergraduates.

The student who did his undergraduate work in some other field will have to spend additional time making up his deficiencies. Courses which are considered as definite prerequisites to the program are principles of accounting, principles of economics, and at least one course in each of the following fields: management, marketing, business law, business finance, and statistics. The major professor may ascertain other deficiencies upon examination of a transcript. A student who is deficient in these requirements may be allowed to remove the deficiency while doing graduate work provided that the undergraduate prerequisites of the specific graduate courses to be taken have been fulfilled.

The requirements for the Master of Business Administration degree may be completed in an academic year by the student who has graduated from an approved curriculum in a department or school of business and is exceptionally strong academically. Ordinarily the student spends a full calendar year completing the requirements.

A field emphasis may be taken in accounting, economics, finance, management, or marketing. A student who uses one of the curriculum courses in his field emphasis must substitute an acceptable 600 level course in another field in the curriculum. Master of Business Administration degree candidates are permitted to include a maximum of one 500 level course in their program.

The degree will be conferred upon candidates who (1) meet the general requirements of the Graduate School, (2) complete the special curriculum requirements as outlined below, and (3) pass an oral and/or written examination.

Curriculum Requirements

	Hours
*ACC 625-Managerial Accounting	3
*ECO 625--Managerial Economics	3
**ECO 620--Statistics for Quantitative Analysis	3
FIN 625--Managerial Finance	3
FIN 685--Business Environment	3
MGT 625--Human Relations in Business	3
MGT 670--Business Policy	3
*MKT 625—Seminar in Marketing	3
Field Emphasis	6
Electives	3
	33

*A student taking a major emphasis in accounting, economics, or marketing will make a proper substitution for the course in his department upon advice of his chairman.

Management 615, **Operation Research, may be substituted, especially by those students taking a field emphasis in management.

Master of Science in Accounting

The Master of Science in Accounting program is designed to prepare students for professional accounting positions in industry, government and public accounting. It may likewise be used as preparatory for additional graduate work at the doctorate level. It differs from the M.B.A. degree in that it is more highly specialized and directed precisely to the discipline of accounting. In addition to the accounting curriculum requirements, this program requires one minor field of twelve (12) hours which permits the student to pursue an in-depth study of a related discipline of his choosing.

Curriculum Requirements

	Hours
ACC 605—Advanced Accounting Theory	3
ACC 610--Advanced Problems in Public Accounting	3
ACC 620—Advanced Cost Accounting and Controllership	3
ACC 630--Tax Planning and Research	3
ACC Electives or Thesis	6
Minor Requirements	12
Elective	3
	33

Master of Arts or Master of Science in Economics

The Department of Economics offers a program leading to a Master of Arts with a major in economics and a program leading to a Master of Science with a major in economics. The purpose of both programs is to prepare students for positions as economists in education, business, and government.

Under either program the student must meet the general requirements of the Graduate School. There is no language requirement for a Master of Science degree and the thesis is optional with the student. A student pursuing the Master of Arts degree must demonstrate a proficiency in an approved foreign language and must also successfully complete an approved research project as evidenced by an accepted thesis. The specific requirements for the two degrees are listed below.

The recommended graduate minor in economics constitutes a systematic study of the economic environment in which we live. Several advanced undergraduate courses which have been designed to provide appropriate instruction in economics to students in other major fields may be taken for graduate credit. The recommended graduate minor in economics consists of ECO 600, 605, and two electives.

In order to promote scholarship, fellowship, and the advancement of economics, all graduate students are encouraged to participate in the activities of the Economic Society, a student organization sponsored by the department. Graduate students who qualify may be offered membership in Omicron Delta Epsilon (Artus), the national honorary economics society.

Curriculum Requirements	**Hours**
ECO 600--Microeconomic Theory	3
ECO 605--Macroeconomic Theory	3
ECO 610--Monetary Theory	3
ECO Electives	6
Minor Requirements	12
Electives or Thesis	6
(Thesis is optional for Master of Science only)	33

COLLEGE OF EDUCATION AND PSYCHOLOGY

Eric M. Gunn, Dean
Walter E. Cooper, Assistant Dean
Herman Boroughs, Coordinator of Graduate Studies

Requirements for Admission to Graduate Programs

Admission to the Graduate School for study in the College of Education and Psychology requires a specific grade point average and an appropriate GRE score. (See general admission requirements in Part III of this **Bulletin.**) Any individual who does not meet the general admission requirements may request additional consideration of his application by appealing to the appropriate department chairman. He may be admitted to a graduate program if he receives the approval of the department chairman, the Dean of the College of Education and Psychology, and the Dean of the Graduate School.

Anyone holding a bachelor's degree from an accredited institution may be admitted as a special graduate student. A special graduate student is not considered to be in a graduate program leading to a degree. If the student demonstrates proficiency in graduate work, he may make application for a graduate degree program and, if approved, the student may use up to nine (9) semester hours of work taken as a special graduate student in the degree program.

Those applicants who wish to study for a master's degree in any area of professional public school work should study for the Master of Education degree, and, therefore, must first hold or qualify to hold a Class A teaching certificate based on a baccalaureate degree in the area in which they wish to concentrate. A Master of Education degree applicant who does not yet qualify for an A certificate may be admitted to the Graduate School, but must meet the requirements of the State of Mississippi for an A certificate in teaching before the degree will be awarded. However, upon the recommendation of the departmental chairman, the Dean of the College of Education and Psychology may waive the requirements of satisfying certification requirements for those students currently employed or preparing for employment in junior or senior colleges, non-public institutions, or positions not requiring certification. In the event that certification requirements are waived, it is incumbent upon the student to recognize this limitation upon the scope of the areas within which he might seek employment in the future.

In the College of Education and Psychology, the minimum requirement for a master's degree is thirty-six (36) semester hours; the specialist's degree requires a minimum additional thirty (30) semester hours; and the doctoral degree requires a minimum of eighty-four (84) semester hours beyond the bachelor's degree.

Degree Programs Offered

The College of Education and Psychology offers graduate programs at three levels: master's degree, specialist's degree, and doctor's degree.

Master's Degrees: Master's degrees are offered in the following departments, with majors as indicated:

Department of Business Education
- Master of Science
- Master of Education

Department of Counseling and Guidance
- Master of Education in School Counseling
- Master of Science in
  - College Counseling
  - Community Counseling

Department of Curriculum and Instruction
- Master of Education in
  - Elementary Education
  - Early Childhood Education
  - Secondary Education
- Master of Science in
  - Reading
  - Secondary Education

Department of Educational Administration and Supervision
- Master of Education in
  - Educational Administration
  - Supervision of Instruction

Department of Industrial and Technical Education
- Master of Science

Department of Library Science
- Master of Arts
- Master of Science

Department of Research and Human Development
- Master of Education

Department of Science Education
- Master of Science
- Master of Education

Department of Special Education
- Master of Education
- Master of Science

Specialist's Degrees: Specialist's degrees are offered in the following departments, with majors as indicated:

Department of Business Education
Business Education
Department of Counseling and Guidance
School Counseling
Department of Curriculum and Instruction
Elementary Education
Emphasis in Reading
Secondary Education
Department of Educational Administration and Supervision
General Administration
Secondary School Administration
Elementary School Administration
Curriculum and Supervision
School Business Management
Department of Research and Human Development
Educational Research
Department of Science Education
Science Education
Department of Special Education
Special Education

Doctoral Degrees: The following departments offer the Doctor of Education and/or the Doctor of Philosophy degrees:

Department of Counseling and Guidance
Department of Curriculum and Instruction
Elementary Education
Secondary Education
Department of Educational Administration and Supervision
Department of Psychology
General Psychology
Clinical Psychology
School Psychology
Developmental Psychology
Department of Science Education
Department of Special Education

DEPARTMENT OF BUSINESS EDUCATION (BED – 105)

The Department of Business Education offers programs of study leading to the Master of Science degree in business education, the Master of Education degree in business education, certification in cooperative office education, and an Educational Specialist's degree in business education. Persons who plan to teach business subjects in junior and senior colleges, who desire Class AA certification in secondary education, who desire certification in cooperative office education, or who desire additional training for employment in the

business world can find a program suited to their professional goals. A person pursuing any one of these programs should have completed an undergraduate major in business teacher education. Candidates not having completed this major must become eligible for Class A certification as a business teacher as a prerequisite to the completion of all requirements for the first three programs listed. To be eligible for admission to the Educational Specialist's degree program, a person must present evidence of satisfactory scholarship in undergraduate and graduate study, hold a master's degree with a major in business education, have a well-defined professional goal, and meet other admission requirements of the University. The department requires a minimum score of 750 on the Graduate Record Examinations for admission to the master's degree program and a minimum score of 800 for admission to the specialist's degree program. Applicants must also meet general requirements for the Graduate School.

The appropriate master's degree will be conferred upon candidates who (1) meet the general requirements of the Graduate School and of the Department of Curriculum and Instruction; (2) complete the special curriculum requirements outlined below; and (3) pass an oral examination. In addition a comprehensive written examination covering course content may be required by the Department of Business Education. A thesis is optional.

The Educational Specialist's degree will be conferred upon candidates who satisfactorily complete items (1) and (2) in the preceding paragraph, pass oral and written examinations, and complete a research problem.

A business student seeking the Doctor of Education or the Doctor of Philosophy degree may major in business education and earn the degree through the Department of Curriculum and Instruction.

MASTER'S PROGRAMS

The Master of Science Degree

Curriculum Requirements	Hours
FIN 640—Managing Financial Institutions	3
FIN 685—The Business Environment	3
*Electives in School of Business Administration	12
RED 601—Research: Its Inroduction and Methodology	3
CIF 604—Foundations in American Education	3
BED 651—Principles of Business Education	3
BED 652—Seminar in Business Education	3
Electives or thesis	4
	31

The Master of Education Degree

Curriculum Requirements	Hours
EDUCATION: Nine (9) semester hours	
RED 601—Research: Its Introduction and Methodology	3
CIF 604—Foundations in American Education	3
EPY 740—Advanced Educational Psychology	3

BUSINESS ADMINISTRATION: Nine (9) semester hours
- ECO 570—Comparative Economic Systems 3
- MGT 625—Human Relations in Business 3
- Electives 3

BUSINESS EDUCATION: Sixteen (16) semester hours
- BED 608—Curriculums in Business Education 3
- BED 651—Principles of Business Education 3
- BED 652—Seminar in Business Education 3
- BED 669—Measurement and Evaluation in Business Education 3
- Electives or thesis 4

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*Electives are to be chosen in consultation with the chairman of the department.

It is recommended that RED 601, the research course, be taken early in each program.

CURRICULUM FOR COORDINATORS OF BUSINESS AND OFFICE EDUCATION PROGRAMS

Persons who hold a Bachelor of Science degree with a major in business teacher education may take the three courses listed below to become certified as coordinators of business and office education programs.

	Hours
BED 552—Philosophy of Vocational Business Education	3
BED 553—Coordination of Vocational Office Occupations Program	3
BED 670—Problems in Vocational Cooperative Office Education	3

EDUCATIONAL SPECIALIST'S DEGREE

Curriculum Requirements

As part of the requirements for the specialist's degree with a major in business education, a student must maintain satisfactory scholarship in completing the following course work:

	Hours
1. **Required courses in basic education or equivalent**	15
Select five:	
a. RED 601—Research: Its Introduction and Methodology	3
b. CIF 604—Foundations in American Education	3
c. CGE 610—Foundations in Guidance	3
d. CIF 607—Basic Course in Curriculum Development	3
e. EPY 740—Educational Psychology	3
f. CIF 632—Measuring Results in Education	3
2. **Area Major** (specialization in business education)	21
a. BED 604—Foundations in Business Education	3
b. BED 511—Principles of Business Education	3
c. Select two:	

BED 653—Improvement of Instruction in Bookkeeping and Related Basic Skills 3
BED 654—Improvement of Instruction in Basic Business 3
BED 655—Improvement of Instruction in Typewriting and Related Skills 3
BED 656—Improvement of Instruction in Shorthand and Transcription 3

d. BED 701—Seminar in Business Education 3
e. Select one:
BED 750—Business Education in the Junior College 3
BED 760—Administration and Supervision in Business Education 3
f. BED 798—Research Problem 3

3. **Related Field** 15 hours

The related field selected should both complement and supplement the major area in rounding out the preparation for one of the career goals of the specialist's program, i.e., (a) advanced technical education for business; (b) teacher education; or (c) administration and supervision. Course credits earned in the basic courses in education are not applicable to the related field.

With the approval of the candidate's advisory committee, a related field may be selected from one of the following: (a) school administration; (b) guidance; (c) educational psychology; (d) vocational education; (e) techniques (research, statistics, and tests and measurements); (f) secondary education.

Also with the approval of the candidate's advisory committee, a combination of courses selected primarily from the foregoing fields may constitute a related field provided such selection contributes directly to the career goal of the candidate.

4. **Outside Minor** - field other than education 12 hours

A candidate pursuing the specialist's degree with a major in business education pursues an outside minor in business administration and/or economics.

5. **Elective courses** (eight [8] semester hours provided minimum hours are taken in the basic, major, related, and minor areas) 0-8 hours

Electives should be selected with approval of adviser to strenghten the candidate's preparation for his chosen career goal.

Scholarship and Examination

In addition to achieving acceptable scores on admission examinations and maintaining satisfactory scholarship through the course work, a candidate will be required to achieve satisfactorily in both written and oral comprehensive examinations in business education.

Completion of Work for Degree

A candidate must complete the requirements for the specialist's degree within six years from the date of admission to candidacy.

DEPARTMENT OF COUNSELING AND GUIDANCE (CGE – 140)

The Department of Counseling and Guidance offers programs at the master's, specialist's, and doctorate levels in guidance, counseling, and student personnel services. The programs are designed to provide specialized professional preparation in the areas of: (1) Elementary and Secondary School Guidance and Counseling; (2) College and University Student Personnel Work; (3) Community Counseling; and (4) Counselor Education and Supervision.

MASTER'S PROGRAMS

The department offers the Master of Education degree in school counseling, the Master of Science degree in college counseling, and the Master of Science degree in community counseling. The general requirements for these programs are as follows:

Admission

Regular:	An undergraduate grade point average of 2.75 and a combined score of 750 or above on the aptitude sections of the GRE.
Conditional:	A student may be admitted on a conditional basis if he has: (a) A score of 750 or above on the aptitude sections of the GRE and a grade point average no lower than a 2.5 (b) A grade point average of 2.75 or above if the GRE is lower than 750.
Removal of Condtional Status:	Maintain a grade of B or better on each graduate course attempted during the first quarter as a full-time student. If a part-time student, a grade of B or better is required on the first nine (9) hours or grades of B or better on all courses taken while completing the nine-hour requirement.

Admission to Candidacy. Candidacy is based upon:

1. An application for admission to candidacy, filed with the department upon the completion of nine (9) to twelve (12) semester hours of course work in the department.
2. Satisfactory completion of the English Proficiency Test.
3. Satisfactory completion of CGE 612 and 613.

Application For Graduation. Graduation is based upon:

1. Completion of a minimum of thirty-six (36) semester hours of course work in an approved program of studies.

2. Satisfactory completion of the comprehensive examination.
3. Satisfactory performance in the counseling practicum.

CURRICULUM PRESCRIPTIONS

The Master of Education Degree in School Counseling: (Secondary Emphasis). The course pattern is designed to provide learning experiences in the area of school guidance and counseling and will meet the professional and academic requirements for Class AA certification for secondary school counselors in Mississippi. A Class A secondary teaching certificate based upon a baccalaureate degree is a prerequisite for this program.

Required Courses: (27 hours)	Hours
RED 601—Research: Its Introduction and Methodology	3
CIF 604—Foundations in American Education	3
CGE 610—Foundations, Organization, and Administration of Secondary Guidance	3
CGE 611—The Information Service in Guidance	3
*CGE 612—Methods and Techniques of Counseling	3
*CGE 613—Use and Interpretation of Tests in Guidance	3
CGE 614—Analysis of the Individual	3
**CGE 760—Guidance and Counseling Laboratory I	3
CGE 696—Supervised Practicum	3

Elective Courses Highly Recommended: (9 hours)	Hours
CGE 711—Theories, Techniques, and Practice of Guidance Consultation	3
PSY 555—Psychology of Personality	3
or	
SOC 550—Social Foundations of Personality	3
ITE 711—Organization and Philosophy of Vocational Education	3
PSY 787—Individual Psychological Testing: Stanford-Binet	3
or	
PSY 788—Individual Psychological Testing: Wechsler Scales	3
EPY 740—Advanced Educational Psychology	3
EPY 774—Child Psychology	3
EPY 775—Advanced Adolescent Psychology	3
CGE 710—Group Counseling	3
SPE 500—Psychology and Education of the Exceptional Child	3
Total	36

*Prerequisite for CGE 760
**Prerequisite for CGE 696

The Master of Education Degree in School Counseling: (Elementary School Counselor - Consultant Emphasis). The course pattern for this program is designed to meet the specialized needs of individuals who desire to work as practitioners in elementary school settings. The program is developmental-

preventive in focus, and is geared to preparing individuals to function effectively as counselors to pupils and as consultants to teachers, parents, and others. The curriculum will prepare the individual to meet the coursework requirements for Class AA elementary counselor certification in Mississippi.* A Class A elementary school teaching certificate is a prerequisite for admission to the program.

Required Courses: (33 hours) **Hours**

RED 601—Research: Its Introduction and Methodology 3
CIF 604—Foundations of American Education 3
CGE 620—Foundations, Organization, and Administration of Elementary Guidance 3
CGE 611—Information Services in Guidance 3
***CGE 612—Methods and Techniques of Counseling 3
***CGE 614—Analysis of the Individual (Elementary Section) 3
CGE 711—Theories, Techniques, and Practice of Guidance Consultation 3
****CGE 760—Guidance and Counseling Laboratory I 3
CGE 696—Supervised Practicum 3
CIE 728—Curriculum Problems in Elementary School 3
**CIE 733—Practicum in Diagnosis and Remediation of Reading Disability of the Classroom Teacher 3

In addition to the above required courses, three hours must be chosen from the following:

CIE 729—Reading in the Elementary School 3
CIE 724—Problems of Teaching Arithmetic 3
CIE 725—Social Studies Education in the Elementary School 3
CIE 713—Advanced Diagnosis and Remediation of Reading Disability for the Classroom Teacher 3

Total 36*

*Three (3) additional hours in elementary education must be taken from the above in order to meet also the minimum state certification coursework requirements for a Class AA elementary teacher's certificate.

**If a student has not had CIE 713 or its equivalent, he must take it as a prerequisite for CIE 733.

***Prerequisite for CGE 760.

****Prerequisite for CGE 696.

The Master of Science Degree in College Counseling: The course pattern is designed to meet the professional preparation needs of a variety of individuals who expect to work in the broad field of college student personnel services. Providing a flexible program through the selection of electives and participation in variable field practicum experiences, the program is geared to the needs of college student personnel workers such as counselors, deans of men and women, directors of housing, directors of student affairs, directors of placement, directors of admissions, and registrars.

Required Courses: (24 hours)	Hours
RED 601—Research: Its Introduction and Methodology	3
CIF 604—Foundations of American Education	3
or	
AED 711 Higher Education in the U.S.	3
*CGE 612—Methods and Techniques of Counseling	3
*CGE 613—Use and Interpretation of Tests in Guidance	3
CGE 640—Student Personnel Work in Higher Education	3
**CGE 760—Guidance and Counseling Laboratory I	3
CGE 696—Supervised Practicum	3
CGE 740—Seminar in Student Personnel Problems	3

Elective Courses Highly Recommended: (12 hours)	Hours
CGE 710—Group Counseling	3
CGE 611—The Information Service in Guidance	3
CGE 732—Marital and Pre-Marital Counseling	3
EPY 740—Advanced Education Psychology	3
EPY 742—Learning and Instruction in Higher Education	3
EPY 775—Advanced Adolescent Psychology	3
PSY 550—Social Psychology	3
PSY 555—Psychology of Personality	3
SOC 571—Social Institutions	3
Total	36

*Prerequisite for CGE 760
**Prerequisite for CGE 696

The Master of Science Degree in Community Counseling: The course pattern for this degree program is purposely broad and flexible. It is designed to prepare individuals for counseling and personnel roles in a variety of community agency settings such as vocational rehabilitation, employment placement, community mental health, family and social welfare, church ministry, and business.

Required Courses: (24 hours)	Hours
CGE 730—Introduction to Community and Rehabilitation Counseling	3
SOC 560—Methods of Social Research	3
or	
RED 602—Introduction to Statistics	3
CIF 604—Foundations of American Education	3
or	
CIF 709—Social Foundations of Education	3
*CGE 612—Methods and Techniques of Counseling	3
*CGE 613—Use and Interpretation of Tests in Guidance	3
**CGE 760—Guidance and Counseling Laboratory I	3
CGE 696—Supervised Practicum	3
CGE 736—Seminar in Problems of Rehabilitation	3

Elective Courses Highly Recommended: (12 hours)	Hours
CGE 532—Community Resources for Guidance	3
CGE 710—Group Counseling	3
CGE 611—The Information Services in Guidance	3
CGE 734—Socio-Psychological Aspects of Disability	3
CGE 735—Medical Aspects of Disability	3
PSY 550—Social Psychology	3
PSY 555—Personality Theory	3
PSY 536—Abnormal Psychology	3
PSY 788—Individual Testing: Weschler Scales	3
EPY 732—Psychology of Mental Retardation	3
SPE 880—Psychology and Education of Emotionally Disturbed	3
SOC 544—Juvenile Delinquency	3
SOC 520—Industrial Sociology	3
SOC 550—Social Foundations of Personality	3
MGT 625—Human Relations in Business	3
MGT 568—Wage and Salary Administration	3
CGE 711—Theories, Techniques, and Practice of Guidance Consultation	3
CGE 732—Marital and Pre-Marital Counseling	3
CJ 503—Criminal Law II	3
CJ 507—Juvenile Justice Systems	3
CJ 508—Problems in Criminal Justice	3
Total	36

*Prerequisite for CGE 760
**Prerequisite for CGE 696

SPECIALIST'S DEGREE

The department offers the specialist's degree in counseling and guidance with emphasis on (1) School Counseling, (2) College Counseling and Personnel Work, and (3) Community Counseling. As a sixth year advanced degree program, the specialist's curriculum presupposes a master's degree in guidance or its equivalent and requires completion of an approved program of study including a minimum of thirty (30) hours credit beyond the master's degree, or sixty-six (66) semester hours beyond the baccalaureate degree.

The curriculum for the specialist's degree is purposely designed to be flexible in order that candidates may develop greater specialization in an area related to their individual professional goals. Included in the course of study is a minimum of nine (9) semester hours credit in cognate areas and an approved field study. The general requirements for the specialist's degree are as follows:

Admission

Regular: A grade point average no lower than 3.25 and a combined score of 800 or above on the aptitude section of the GRE.

Conditional: A grade point average between 3.00 and 3.25 on previous

graduate work and a GRE score no lower than 800 or a grade point average no lower than 3.25 and a GRE score between 750 and 800. An on-campus interview is required before a recommendation for conditional admission is made.

Removal of Conditional Status: On the recommendation of the department chairman provided the student has attained a grade point average of at least 3.25 on the first nine (9) hours of course work numbered 600 or above or on all courses taken while completing this requirement.

Admission to Candidacy

1. The application for admission to candidacy must be submitted upon the completion of nine (9) to twelve (12) semester hours of course work in the department beyond a master's degree in guidance or its equivalent.
2. The English Proficiency Test must be passed satisfactorily.
3. Satisfactory completion of the qualifying examination.

Application for Graduation: Graduation is based upon:

1. Completion of an approved program of studies containing a minimum of thirty (30) semester hours credit beyond a master's degree in guidance or its equivalent or sixty-six (66) semester hours beyond the baccalaureate degree.
2. Satisfactory completion of a comprehensive examination.
3. Satisfactory completion, write-up, and defense of the field study.
4. Satisfactory performance in laboratory practicum.

DOCTORAL DEGREES

The department offers the Doctor of Education (Ed.D.) and the Doctor of Philosophy (Ph.D.) degrees in counseling and guidance. General course requirements beyond the baccalaureate degree include a minimum of forty (40) semester hours work in the major area of counseling and guidance, a minimum of thirty (30) semester hours work in an interdisciplinary supporting minor, and the remainder of ninety (90) semester hours work in foundations excluding research tools (languages and/or statistics) and dissertation.

Working from a common core of courses in counseling and guidance, the student may develop from among the following program emphases a program of study which is consistent with his professional needs and career objectives:

A. **School Guidance.** This emphasis is designed for individuals who expect to work as counselors, guidance directors, and directors of pupil personnel services in school settings.

B. **Student Personnel Work in Higher Education.** This emphasis is designed for individuals who expect to work as student personnel specialists and deans in college and university settings. Standards prepared by the Commission on Professional Development of the

Council of Student Personnel Associations in Higher Education and the Interdivisional Committee of the American Personnel and Guidance Association serve as guides in developing programs of study.

C. **Counseling.** This emphasis is designed for students who are preparing for positions in college and university counseling centers and in community agencies such as vocational rehabilitation, the Veterans Administration, and other agencies which utilize skills and competencies of doctoral-level counseling specialists. Students taking this emphasis typically are given greater exposure to counseling and psychological theory and engage in extensive laboratory practice in counseling with a broad range of clients.

D. **Counselor Education and Supervision.** This emphasis is designed for students who plan to engage in the teaching and training of counselors at the college and university level. Students in this program typically combine either the school guidance or student personnel emphasis with the counseling emphasis and, toward the end of their program, are placed in supervised internship experiences in counselor education and supervision.

General Requirements for the Doctoral Program

Admission

Regular:	A minimum grade point average of 3.50 on previous graduate work and a combined score of 850 on the aptitude section of the Graduate Record Examinations. An on-campus interview is required.
Conditional:	A grade point average between 3.25 and 3.50 on previous graduate work and a GRE score no lower than 850 or a grade point average no lower than 3.50 and a GRE score between 800 and 850. An on-campus interview is required.
Removal of Conditional Status:	On the recommendation of the department chairman provided the student has attained a grade point average of at least 3.25 on the first nine (9) hours of course work numbered 600 or above or on all courses taken while completing the requirement.

Qualifying Examinations

1. Should be taken after completion of approximately eighteen (18) semester hours work in the department beyond a master's degree or equivalent in guidance.
2. May not be taken prior to admission to a doctoral program and satisfactory completion of the English Proficiency Test.
3. May not be taken prior to completion of at least one quarter of on-campus laboratory counseling practicum.
4. May be retaken one time after an initial failure. Students may be asked to retake all or parts of the examination after complying with departmental recommendations regarding additional study and

preparation. Oral followups to the examination may be scheduled at the discretion of the department.

5. The results on a master's degree or specialist's degree comprehensive examination may not be substituted for this examination.
6. The doctoral advisory committee will be appointed, and the course planning sheet will be filed after satisfactory completion of the qualifying examinations.

Comprehensive Examinations

1. May be scheduled by individual appointment with the department chairman during or after the last quarter in which the student is enrolled in courses listed on the approved course of study.
2. Will consist of written and/or oral examination.
3. May be retaken one time after initial failure.
4. Must be completed a minimum of two quarters prior to graduation.

Residency

1. Completion of the doctoral residency requires full-time on-campus study for three consecutive quarters. During the residency period, students are expected:
   (a) To carry a minimum course load of nine (9) semester hours per quarter for three consecutive quarters or, in the case of students on one-half time University fellowships, twenty-seven (27) semester hours work in consecutive quarters.
   (b) To participate in a variety of credit and non-credit departmental activities including three quarters of CGE 810, laboratory and practicum experiences, individual case work, field trips, and other related professional activities.
   (c) To be relieved of job responsibilities with off-campus employers.

Admission to Candidacy

Admission to candidacy for a doctoral degree will be approved by the student's advisory committee upon:

1. Completion of language and/or statistics requirements. Doctor of Education candidates will meet intermediate level statistics proficiency; Doctor of Philosophy candidates must show proficiency in (a) one language and statistics or (b) statistics and computer science.
2. Completion of residency requirements.
3. Satisfactory completion of the comprehensive examination.
4. Approval of a dissertation prospectus. The dissertation prospectus may be presented to the advisory committee for approval any time after the comprehensive examination has been passed satisfactorily.

Application For Graduation: Graduation is based upon:

1. Completion of all requirements described above
2. Successful defense of the completed dissertation.

DEPARTMENT OF CURRICULUM AND INSTRUCTION

The Department of Curriculum and Instruction includes the areas of elementary education, early childhood education, reading, and secondary education. The department offers programs at the master's, specialist's, and doctoral levels in these areas. The following degrees are offered:

Master of Education in Elementary Education
Master of Education in Early Childhood Education
Master of Science in Reading
Master of Education and Master of Science in Secondary Education
Specialist's Degree in Elementary Education
Specialist's Degree in Elementary Education with Emphasis in Early Childhood Education
Specialist's Degree in Elementary Education with Emphasis in Reading
Specialist's Degree in Secondary Education
Doctor of Education and Doctor of Philosophy in Elementary Education
Doctor of Education and Doctor of Philosophy in Elementary Education with Emphasis in Reading
Doctor of Education and Doctor of Philosophy in Secondary Education

Only candidates holding a Class A certificate, or who exhibit willingness to meet Class A certification requirements at the undergraduate level prior to completion of a graduate degree program, will be admitted to the Department of Curriculum and Instruction. However, upon the recommendation of the departmental chairman, the certification requirement may be waived for a student pursuing a graduate degree in the area of secondary education who is currently employed or preparing for employment in a junior or senior college, non-public institution, or for a position not requiring certification. In the event the certification requirement is waived, it is incumbent upon the student to recognize this limitation upon the scope of the areas within which he might seek employment in the future.

The Department of Curriculum and Instruction strongly recommends that a student gain teaching experience before completing the latter two-thirds of his master's degree program. No student will be eligible to receive a specialist's degree until he has completed at least one year of teaching experience. Three years of teaching experience is a requisite for a doctor's degree.

MASTER'S PROGRAMS

The Department of Curriculum and Instruction offers master's degrees in elementary education, early childhood education, reading, and secondary education.

The program of study at the master's degree level is designed to increase the professional competency of the classroom teacher and to provide the course work necessary to meet standards of teacher certification at this advanced level.

The master's program requires regular admittance procedures, appointment of a graduate adviser, the filing of an approved program of studies,

satisfactory completion of the English Proficiency Test, and successful completion of the comprehensive examination.

ADMISSION REQUIREMENTS

In order to be admitted on a regular basis to a master's degree program, an applicant must have a grade point average of at least 2.75 (figured on an A equals 4.0 scale) for the last two years of undergraduate study and at least 3.0 on undergraduate courses in the area of proposed graduate study. In addition, the applicant must make a combined score of at least 750 on the aptitude sections of the Graduate Record Examinations.

If an applicant does not meet the above requirements for regular admission, he may be admitted to a master's degree program on a conditional basis in one of two ways.

1. He must make a combined score of at least 750 on the aptitude sections of the Graduate Record Examinations and must have a grade point average no lower than 2.5
2. He must have a grade point average of at least 2.75 if he has scored lower than 750 on the aptitude sections of the Graduate Record Examinations.

DEGREES

Master of Education Degree in Elementary Education Hours

RED 601—Research: Its Introduction and Methodology 3
CIF 604—Foundations in American Education 3
CIE 706—Psychology of Reading 3
or
CIE 729—Reading in the Elementary School 3
AED 600—Basic Course in Educational Administration 3
CIE 728—Curriculum Problems in the Elementary Schools 3
CIF 632—Measuring Results in Education 3
EPY 774—Advanced Child Psychology 3
CIE 698—Thesis. Optional. Credit deferred until thesis is completed 6

In addition to the above required core courses, at least three courses (9 hours) must be chosen from the following:

SCE 730—Physics for Elementary School Teachers 3
SCE 731—Chemistry for Elementary School Teachers 3
SCE 732—Biology for Elementary School Teachers 3
SCE 733—Earth Sciences for Elementary School Teachers 3
CIE 724—Problems of Teaching Arithmetic 3
CIE 725—Social Studies Education in Elementary School 3
CIF 660—Economic Education for Teachers 3

Total Hours-30 non-thesis program; 36 thesis program
Free Electives—6 hours non-thesis program

Master of Education Degree in Early Childhood Education **Hours**

RED 601—Research: Its Introduction and Methodology 3
CIF 604—Foundations in American Education 3
CIE 770—Practicum in Early Childhood Education 3
CIE 772—Practicum with Parents 3
CIE 777—Evaluation in Early Childhood Education 3
CIE 778—Creative and Mental Growth 3
CIE 776—Seminar in Early Childhood Education 3
or
CIE 780—Research in Child Development 3
CIE 698—Thesis. Optional. Credit deferred until thesis is completed 6
In addition to the above required core courses, at least two courses (6 hours) must be chosen from the following:
CIE 706—Psychology of Reading 3
or
CIE 729—Reading in the Elementary School 3
CIE 728—Curriculum Problems in the Elementary School 3
EPY 774—Advanced Child Psychology 3
Total Hours-27 non-thesis program; 33 thesis program
Free Electives-9 hours non-thesis program; 3 hours thesis program

Master of Science Degree in Reading **Hours**

RED 601—Research: Its Introduction and Methodology 3
CIF 604—Foundations in American Education 3
CIE 705—Modern Concepts in Reading Skill Development 3
CIE 706—Psychology of Reading 3
CIE 729—Reading in the Elementary School 3
CIE 754—Reading in the Secondary School 3
CIE 713—Advanced Diagnosis and Remediation of Reading Disability for the Classroom Teacher 3
CIE 733—Practicum in Diagnosis and Remediation of Reading Disability for the Classroom Teacher 3
SPE 511—Speech and Hearing Problems for the Classroom Teacher 3
AED 622—Supervision and Curriculum in Reading 3
CIE 698—Thesis. Optional. Credit deferred until thesis is completed 6
Total Hours-30 non-thesis program; 36 thesis program
Free Electives-6 hours non-thesis program

Master of Education Degree and Master of Science Degree in Secondary Education **Hours**

Plan I (Thesis Program)
RED 601—Research: Its Introduction and Methodology 3
CIF 604—Foundations in American Education 3
EPY 740—Advanced Educational Psychology 3
CGE 610—Fundamentals of Guidance 3
or
CIS 708—High School Curriculum 3

or
CIF 632–Measuring Results in Education 3
CIS 698–Thesis. Credit deferred until thesis is completed. 6

Plan II (Non-thesis Program)
RED 601–Research: Its Introduction and Methodology 3
CIF 604–Foundations in American Education 3
CGE 610–Fundamentals of Guidance 3
CIS 708–High School Curriculum 3
EPY 740–Advanced Educational Psychology 3
CIF 632–Measuring Results in Education 3

In addition to the above eighteen (18) hours core requirement of Plan I and Plan II, a minor of at least eighteen (18) hours must be taken in one of the following subject areas:

Art	Communication
Biology	Theatre Arts
Chemistry	Geology
Physics	Technical and Industrial Education
English	*Mathematics
Foreign Languages	**Science
Music	***Social Studies

*Courses in computer science and statistics may be included in this area.
**A combination of science courses may be used if the adviser determines that the need exists.
***Courses may be taken in any one or a combination of the following areas: history, geography, political science, sociology, and economics.

Under certain conditions, other minors may be selected with the approval of the department chairman.

SPECIALIST'S PROGRAMS

The Department of Curriculum and Instruction offers specialist's degrees in elementary education, secondary education, elementary education with emphasis in reading, and elementary education with emphasis in early childhood education. As a sixth year program, the specialist's degree program requires regular admittance procedures, appointment of a graduate adviser and committee, filing an approved program of studies, satisfactory completion of the English Proficiency Test, and completion of an approved field study.

Course work within the specialist's degree programs includes the requirements outlined under the master's degree programs in addition to the requirements specified in this section.

ADMISSION REQUIREMENTS

In order to be admitted on a regular basis to a specialist's degree program an applicant must have a grade point average no lower than 3.25 on previous graduate work and a combined score of at least 800 on the aptitude sections of

the Graduate Record Examinations.

If an applicant does not meet the above requirements for regular admission, he may be admitted to a specialist's degree program on a conditional basis in one of two ways.

1. He must make a combined score of at least 800 on the aptitude sections of the Graduate Record Examinations and must have a grade point average no lower than 3.00 on previous graduate work.
2. He must have a grade point average no lower than 3.25 on previous graduate work and must make a combined score of at least 750 on the aptitude sections of the Graduate Record Examinations.

Specialist's Degree in Elementary Education **Hours**

RED 602—Introduction to Educational Statistics 3
CIF 818—Comparative Philosophies of Education 3
AED 620—Supervision of Instruction 3
EPY 720—Learning and Motivation I 3
or
EPY 740—Advanced Educational Psychology 3
CIE 798—Research Problem 3
Total. . . . 15

In addition to the above required core courses, at least four courses (12 hours) must be taken in a subject field or fields.

Total Required Hours-27 minimum
Electives-3 hours

Specialist's Degree in Elementary Education With Emphasis in Early Childhood Education **Hours**

RED 602—Introduction to Educational Statistics 3
CIF 818—Comparative Philosophies of Education 3
AED 620—Supervision of Instruction 3
EPY 720—Learning and Motivation I 3
or
EPY 740—Advanced Educational Psychology 3
CIE 798—Research Problem 3
Total. . . . 15

In addition to the above required core courses, at least four courses (12 hours) will be taken in the area of early childhood education.

Total Required Hours-27 minimum
Electives-3 hours

Specialist's Degree in Elementary Education with Emphasis in Reading **Hours**

RED 602—Introduction to Educational Statistics 3
CIF 818—Comparative Philosophies of Education 3
AED 620—Supervision of Instruction 3
EPY 720—Learning and Motivation I 3
or
EPY 740—Advanced Educational Psychology 3

CIE 798–Research Problem 3
Total. . . .15

In addition to the above required core courses, at least four courses (12 hours) will be taken in the area of reading.

Total Required Hours-27 minimum
Electives-3 hours

Specialist's Degree in Secondary Education	**Hours**
RED 602–Introduction to Educational Statistics	3
CIF 818–Comparative Philosophies of Education	3
EPY 775–Advanced Adolescent Psychology	3
AED 704–School Community Relations	3
or	
AED 620–Supervision of Instruction	3
CIS 798–Research Problem	3
Total. . .	15

In addition to the above fifteen (15) hour core requirement, a minor of at least fifteen (15) hours must be taken in one of the subject areas listed under the heading **Master of Education Degree** and **Master of Science Degree in Secondary Education.** With the approval of the department chairman, a student who will be assuming major responsibility for reading programs at the secondary school or college level may use reading as the subject area (minor) for his specialist's degree.

Total Required Hours-30 minimum

DOCTORAL PROGRAMS

The Department of Curriculum and Instruction offers the Doctor of Education and the Doctor of Philosophy degrees in elementary education, secondary education, elementary education with emphasis in reading,, and elementary education with emphasis in early childhood education. If a student desires to receive a Doctor of Philosophy degree he should follow one of the programs outlined in this section and, in addition, gain proficiency in a foreign language or computer programming language.

There are three distinct phases through which all students proceed in pursuit of the doctoral program. These include:

1. Phase One–involvement in procedures relative to general admittance requirements; appointment of a major professor; successful completion of the Miller Analogies, English Proficiency, and qualifying examinations; and appointment of the candidate's doctoral committee.
2. Phase Two–involvement in procedures relative to tentative program of studies, acceptance of prospectus, successful completion of the language and/or statistics requirements, completion of the residency and course work requirements, successful completion of the comprehensive examination, and admission to candidacy for a doctoral degree.
3. Phase Three–involvement in procedures relative to approval of dissertation.

ADMISSION REQUIREMENTS

In order to be admitted on a regular basis to a doctoral program, an applicant must have a grade point average no lower than 3.5 on previous graduate work and a combined score of at least 900 on the aptitude sections of the Graduate Record Examinations.

If an applicant does not meet the above requirements for regular admission, he may be admitted to a doctoral program on a conditional basis in one of two ways.

1. He must make a combined score of at least 900 on the aptitude sections of the Graduate Record Examinations and must have a grade point average no lower than 3.25 on previous graduate work.
2. He must have a grade point average no lower than 3.5 on previous graduate work and must make a combined score of at least 850 on the aptitude sections of the Graduate Record Examinations.

DEGREES

Doctor of Education Degree in Elementary Education **Hours**

RED 752—Educational Research: Descriptive Statistical Methods 3
RED 753—Educational Research: Significance Tests and Research Design 3
RED 896—Advanced Educational Research 3
CIF 816—History of Public Education in the United States 3
CIF 818—Comparative Philosophies of Education 3
EPY 720—Learning and Motivation I 3
or
EPY 740—Advanced Educational Psychology 3
AED 620—Supervision of Instruction 3
CIE 862—Seminar in Elementary Education 3
CIE 797—Independent Study and Research . . . . . Hours arranged
Not to be counted as credit toward a degree
CIE 898—Dissertation

In addition to the above twenty-four (24) hours core requirement at least twelve (12) hours must be earned in a subject field or fields and a minimum of nine (9) hours in cognate areas, preferably in the social sciences.

Electives should be chosen to complete a program consisting of a minimum of eighty-four (84) graduate hours, exclusive of the dissertation and statistics (RED 752, and RED 753), beyond the bachelor's degree. More than eighty-four (84) hours may be required in order to satisfy deficiencies which may exist in the students's background and preparation.

Doctor of Education Degree in Elementary Education with Emphasis in Early Childhood Education **Hours**

RED 752—Educational Research: Descriptive Statistical Methods 3
RED 753—Educational Research: Significance Tests and Research Design 3

RED 896–Advanced Educational Research 3
CIF 816–History of Public Education in the United States 3
CIF 818–Comparative Philosophies of Education 3
EPY 720–Learning and Motivation 3
or
EPY 740–Advanced Educational Psychology. 3
AED 620–Supervision of Instruction 3
CIE 862–Seminar in Elementary Education 3
CIE 797–Independent Study and Research . . . . . Hours arranged
Not to be counted as credit toward a degree
CIE 898–Dissertation

In addition to the above twenty-four (24) hour core requirement, at least twelve (12) hours must be earned in the area of early childhood education and a minimum of nine (9) hours in cognate areas, preferably in the social sciences.

Electives should be chosen to complete a program consisting of a minimum of eighty-four (84) graduate hours, exclusive of the dissertation and statistics (RED 752 and RED 753), beyond the bachelor's degree. More than eighty-four (84) hours may be required in order to satisfy deficiencies which may exist in the student's background and preparation.

Doctor of Education Degree in Elementary Education with Emphasis in Reading **Hours**

RED 752–Educational Research: Descriptive Statistical Methods 3
RED 753–Educational Research: Significance Tests and Research Design 3
RED 896–Advanced Educational Research 3
CIF 816–History of Public Education in the United States 3
CIF 818–Comparative Philosophies of Education 3
EPY 720–Learning and Motivation I 3
or
EPY 740–Advanced Educational Psychology 3
AED 620–Supervision of Instruction 3
CIE 862–Seminar in Elementary Education 3
CIE 797–Independent Study and Research 3
Not to be counted as credit toward a degree.
CIE 898–Dissertation.

In addition to the above twenty-four (24) hour core requirement, at least twenty-one (21) hours must be earned in the area of reading and a minimum of nine (9) hours in cognate areas, preferably in the social sciences.

Electives should be chosen to complete a program consisting of a minimum of eighty-four (84) graduate hours, exclusive of the dissertation and statistics (RED 752 and RED 753), beyond the bachelor's degree. More than eighty-four (84) hours may be required in order to satisfy deficiencies which may exist in the student's background and preparation.

Doctor of Education Degree in Secondary Education **Hours**

RED 752--Educational Research: Descriptive Statistical Methods . . . . . e
RED 753--Educational Research: Significance Tests and
Research Design 3
RED 896--Advanced Educational Research 3
CIF 816--History of Public Education in the United States 3
CIF 818--Comparative Philosophies of Education
EPY 775--Advanced Adolescent Psychology 3
AED 704--School Community Relations 3
or
AED 620--Supervision of Instruction 3
CIS 797--Independent Study and Research 3
Not to be counted as credit toward a degree.
CIS 898--Dissertation.

The courses listed above will serve as a core program for students pursuing the doctoral degree in secondary education. The doctoral program consists of a minimum of eighty-four (84) graduate hours, exclusive of the dissertation and statistics (RED 752 and RED 753), beyond the bachelor's degree. More than eighty-four (84) hours may be required in order to satisfy deficiencies which may exist in the student's background and preparation. Of the total number of hours required of a doctoral student in secondary education, approximately one-half must be taken in one of the subject areas listed under the heading **Master of Education Degree** and **Master of Science Degree in Secondary Education.**

DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND SUPERVISION (AED – 130)

The programs for the major in educational administration encompass the full range of administrative positions and lead to the master's degree, the specialist's degree, and the doctor's degree. Programs at the master's degree level provide preparation in the elementary school principalship, the junior high school principalship, the high school principalship, and supervision of instruction. Programs at the specialist's and doctorate levels provide preparation for the superintendency and central administrative staff positions. In addition, the program at the doctoral level provides preparation for college teachers of educational administration and persons desiring to prepare for administration in higher education.

The following course patterns for the different levels set forth only the minimum core requirements, and the electives selected to suit individual needs and objectives must be chosen with the advise and approval of the student's major professor. Therefore, it is mandatory that the student consult early in his program, and frequently thereafter, with his major professor concerning the selection of courses and sequence in which these courses will be taken.

DEPARTMENTAL POLICIES

The following departmental policies are supplementary to the rules and regulations of the University and the Graduate School as set forth elsewhere in this **Bulletin.**

PROGRAMS AND COURSES IN EDUCATIONAL ADMINISTRATION

MASTER'S PROGRAMS

Admission

Regular: A minimum grade point average of 2.75 and a combined score of 750 on the aptitude phase of the Graduate Record Examinations.

Conditional: Departmental action provided the student has a score of 750 or above on the aptitude section of the Graduate Record Examinations and a grade point average no lower than 2.5 or a grade point average of 2.75 or above if the Graduate Record Examinations score is below 750.

Application for Graduation Graduation is based upon:

1. Satisfactory completion of the English Proficiency Test.
2. Completion of an approved program of studies consisting of a minimum of thirty-six (36) semester hours.
3. Satisfactory completion of the comprehensive examination.

Educational Administration **Hours**

RED 601—Research: Its Introduction and Methodology 3
(Initial enrollment in the program must be in this course)
CIF 604—Foundations in American Education 3
CIF 607—Basic Course in Curriculum Development 3
EPY 740—Advanced Educational Psychology 3
AED 600—Basic Course in Educational Administration 3
AED 620—Supervision of Instruction* 3
AED 650—School Business Management* 3
AED 698—Thesis. Credit deferred until thesis is completed.** 4
Total 21 - 25 hours.

Electives—11 or 15 hours. Subject to the approval of the student's adviser, elective courses are to be taken as follows:

1. Nine (9) semester hours must be taken in Educational Administration and Supervision with one course selected from the following:
   AED 632—Organization and Administration of the Junior High School* 3
   AED 634—Secondary School Administration* 3
   AED 630—The Elementary School Principal* 3

2. The remaining elective courses may be taken in related areas.

*Prerequisite: AED 600.

**Required only of student writing a thesis

Supervision of Instruction	Hours
RED 601—Research: Its Introduction and Methodology (Initial enrollment in the program must be in this course)	3
CIF 604—Foundations in American Education	3
CIF 607—Basic Course in Curriculum Development	3
EPY 740—Advanced Educational Psychology	3
AED 600—Basic Course in Educational Administration	3
AED 620—Supervision of Instruction*	3
AED 720—Advanced Curriculum Development*	3
AED 738—Practicum in Supervision**	3
AED 698—Thesis. Credit deferred until thesis is completed.**	4

Total—24 - 28 hours.

Electives—8 to 12 hours. These courses will be chosen from related areas subject to the approval of the student's major professor.

*Prerequisite: AED 600.

**Prerequisite: AED 620.

***Required only of students writing a thesis.

SPECIALIST'S DEGREES

Admission

Regular: A minimum grade point average of 3.25 on previous graduate work and a combined score of 800 on the aptitude phase of the Graduate Record Examinations.

Conditional: A grade point average between 3.00 and 3.25 on previous graduate work and a Graduate Record Examinations score no lower than 800 or a grade point average no lower than 3.25 and a Graduate Record Examinations score between 750 and 800.

Application for Graduation Graduation is based upon:

1. Completion of an approved program of studies as determined by the student's committee and which may consist of more than the minimum thirty-three (33) semester hours of credit required for graduation.
2. Satisfactory completion of the comprehensive examination.
3. Satisfactory completion of the English Proficiency Test.
4. Successful defense of the research project.

PROGRAMS

The specialist's degree students must have completed all courses or their equivalent in the master's degree program Those courses not taken must be completed but will not count as part of the specialist program Additional electives are required for previously completed required courses.

A minimum of nine (9) semester hours in cognate areas is required in all of the specialist's degree programs. The Department defines cognate areas as those courses which broaden and complement the student's program which are outside the areas of professional education. These courses and other electives will be chosen with the approval of the student's major professor and additional hours may be required to satisfy deficiencies in the student's program.

Administration

AED 700, 704, 706, 710, 720, 736, 738, 798.
Total–24 hours.
Electives–9 hours in cognate areas.

Secondary Administration

AED 704, 708, 710, 738, 798.
Total–18 hours.
Electives–15 hours with 9 in cognate areas.

Elementary Administration

AED 704, 710, 720, 738, 798.
Total–15 hours.
Electives–18 hours with 9 in cognate areas.

Curriculum and Supervision*

AED 708, 720, 738, 798; CIF 632; CIE 728; CIS 708.
Total 21 hours.
Electives–12 hours with 9 in cognate areas. AED 604 or CIF 619 is required as the first elective if any of the above courses have been completed prior to entering this program.

*AED 600 and 620, CIF 607, and EPY 740 are required prerequisites.

School Business Management*

AED 650, 698, 700, 704, 706, 708, 710.
Total–21 hours.
Electives–12 hours from business oriented courses.
Suggested courses are MGT 568, 572, 625; ACC 570; RED 712; FIN 640; BED 560.

*CIF 607, AED 600, and RED 601 are required prerequisites.

Administration of Occupational Education*

AED 650, 700, 706, 710, 712, 717, 719, 798 and ITE 711.
Total–24 hours from above including AED 798.
Electives–9 hours selected from the following cognate areas:
Industrial Psychology, Management Training and Development, Economic Development, Advanced Labor Economics, and Economic Geography.

*AED 600, AED 620, and CIF 604 are required prerequisites.

DOCTORAL DEGREES

Admission

Regular: A minimum grade point average of 3.50 on previous graduate work and a combined score of 900 on the aptitude

phase of the Graduate Record Examinations.

Conditional: A grade point average between 3.25 and 3.50 on previous graduate work and a Graduate Record Examinations score no lower than 900 or a grade point average no lower than 3.50 and a Graduate Record Examinations score between 800 and 900.

Qualifying Entrance Examination

1. Must be taken prior to the completion of eighteen (18) semester hours of study within the department.
2. May not be taken prior to the receipt of satisfactory GRE scores, the results of the Millers Analogies Test, and satisfactory completion of the English Proficiency Test.
3. Regularly admitted doctoral students who fail the examination may repeat it upon the completion of nine (9) semester hours of credit after the quarter in which the examination was taken.
4. The results of a master's degree comprehensive examination may not be substituted for this examination.

Planning Sheet Planning sheets are completed after the qualifying examination has been passed and the committee appointed, but before the student has completed twenty-seven (27) semester hours.

Admission to Candidacy Admission to candidacy should be submitted one quarter prior to graduation and will be approved by the student's graduate committee upon:

1. Completion of an approved program of studies.
2. Satisfaction of the language and/or statistics requirement.
3. Completion of an approved dissertation prospectus.
4. Completion of the comprehensive examination.
5. Completion of the residency requirement, which consists of three consecutive quarters of full-time studies.

Application for Graduation Graduation is based upon:

1. Meeting the departmental and Graduate School deadlines for receiving completed dissertation.
2. Successful defense of the completed dissertation.

PROGRAMS

At the doctoral level, programs are provided in (1) Public School Administration and (2) Educational Administration with an emphasis in Higher Education. The general administration program provides preparation for the superintendent, other central office positions, and college teachers, while the program emphasizing higher education is designed to prepare administrators of higher education.

The doctoral program requires a minimum of eighty-four (84) semester hours beyond the bachelor's degree exclusive of the dissertation and proficiency in statistics. A minimum of thirty-two (32) semester hours must be taken on the

Hattiesburg campus. The student's doctoral committee, appointed by the Graduate Dean, will approve the selection of required courses and electives and in order to secure breadth and depth in the student's preparation program may require more than the minimum number of hours. The student's program shall include a minimum of nine (9) semester hours of graduate credit in cognate areas, preferably in the social sciences. The department defines cognate areas as those courses which broaden and complement the student's program which are outside the areas of professional education.

Each doctoral student will be required to participate in a variety of laboratory and field experiences, many of which may not be connected with specific courses.

DEPARTMENT OF INDUSTRIAL AND TECHNICAL EDUCATION (ITE – 165)

The Department of Industrial and Technical Education offers programs leading to the Master of Science degree.

(1) **Major in Industrial Arts Education**: The student will be guided by the department chairman in selecting a minimum of twenty (20) semester hours from courses offered in the department, and twelve (12) semester hours in a minor area. The minor may include education, psychology, and guidance courses.

(2) **Major in Vocational Technical Education**: The student will be guided by the department chairman in selecting a minimum of twenty-one (21) semester hours offered in the department, and an additional fifteen (15) semester hours in the administration and curriculum and instruction areas.

For admission into the department, the student must meet the general requirements for admission into the graduate school (Part III of this Bulletin) and make a minimum combined score of 750 on the GRE aptitude sections.

For additional information pertaining to the specific courses in the program, contact the department chairman.

DEPARTMENT OF LIBRARY SCIENCE (LS – 170)

The Department of Library Science participates in programs leading to the Master of Arts and Master of Science degrees. The general requirements for these degrees are outlined in Part IV of the **Graduate Bulletin**. A graduate student in library science must meet the general requirements for admission to the University's graduate program scoring not lower than 750 on the combined aptitude sections of the GRE.

MASTER'S PROGRAMS

Master of Science Degree

Students desiring to specialize in school library media programs should take a minimum of twelve (12) courses (36 semester hours) in the combined fields of library science, audiovisual media, and professional education. Students planning to use this program for a Mississippi Class AA certificate in library science must meet the requirements for the Class A certificate.

Professional requirements include RED 601, CIS 607 or 608, and EPY 610 or 616. Departmental requirements include: LS 604, LS 608, LS 635, LS 555, LS 665 or 666 or 667, LS 570, LS 571, LS 572, and LS 668. The media courses, CIF 640 and AED 617, will count as related library science courses provided they are taken in residence. If the student's undergraduate major at the University was in library science, the core courses LS 604, LS 608, and CIF 619 will not be required.

Master of Arts Degree

Students desiring to prepare for positions in public, college, and special library fields should follow a Master of Arts degree program. For the Master of Arts degree, a minimum of thirty-six (36) semester hours is required. The candidate must also demonstrate a proficiency in a foreign language or computer technology. A candidate without an undergraduate major in library science will have to take LS 301, LS 427, and LS 462. These undergraduate technical courses will not count toward the Master of Arts degree.

DEPARTMENT OF PSYCHOLOGY (PSY – 175)

The Department offers the Master of Arts, the Master of Science, and doctoral programs in general psychology, in clinical psychology, in developmental psychology, and in school psychology. The general requirements for master's and doctoral degrees are listed in Part IV of this **Bulletin.**

Students desiring to do graduate work in psychology must have a foundation of undergraduate courses in statistics and experimental psychology. Foundation courses in physiological psychology, psychological measurement, and the history of psychology are also highly recommended as prerequisites. A minimum total score (quantitative + verbal) of 1,000 on the aptitude section of the Graduate Record Examinations is required for regular admission to graduate work in psychology and a B average or better in the undergraduate major. Students seeking admission to post-master's level work normally are required to come to the campus for a personal interview as a part of the application procedure for advanced standing.

MASTER'S PROGRAMS

The Master of Arts Degree in Psychology

This degree program is planned to prepare students for advanced graduate work to the doctoral level, or to teach in junior or senior colleges, or to work in

certain research settings. Candidates must pass the foreign language requirement and are required to write a thesis. Core courses for this degree include 720, 724, 735, 755, 762, 763, 794, and 698.

The Master of Science Degree in Psychology

This degree plan is essentially a professional-training, terminal program with emphasis on formal course work and paralleling practicum experience in schools, community mental health center, hospitals and state schools for the mentally retarded, etc. The emphasis is on pschometrics and behavior modification. Core courses include 720, 721, 734, 735, 762, 787, 788, and 794 with supervised practicum for a minimum of five quarters. Neither a foreign language nor a thesis is required in this degree program. It normally requires two years to complete.

THE DOCTOR OF PHILOSOPHY DEGREE

The sequence of courses leading to the Doctor of Philosophy degree in general psychology is planned to prepare students to be college and university teachers of psychology, or to become research workers in a variety of settings, including universities, governmental agencies, schools and hospitals, and industry.

The Doctor of Philosophy degree in clinical psychology is planned to prepare students for diagnostic, psycho-therapeutic and research work in a variety of settings which represent programs for community-wide prevention or amelioration of mental illness. The sequence of courses and other experiences provided for these students is outlined according to American Psychological Association standards. Included in the program are wide practicum and internship experiences both in the University Clinic, mental hospitals, and in community mental health and mental retardation settings.

The doctoral program in developmental psychology is designed to prepare students to be college and university teachers and to conduct basic and applied research in the various areas of developmental psychology. An interdepartmental sequence of courses stresses the theorectical and empirical foundations of child and adolescent psychology as well as various areas emphasizing exceptional children. Developmental research is encouraged in conjunction with the experimental, clincial, or school programs within the department. In addition, campus facilities for observational studies and child research include the Infant Development Center and the University Nursery and Kindergarten schools and a mobile Developmental Laboratory.

The doctoral program in school psychology consists of a sequence of courses and other experiences which prepare students for a variety of psychological services in schools, or to conduct research in schools on psychological development, learning and pupil-teacher interaction, psychological measurement, educational psychology, and psycho-educational processes.

Students contemplating graduate work in psychology are invited to communicate directly with the Department of Psychology.

DEPARTMENT OF RESEARCH AND HUMAN DEVELOPMENT (RED – 135) (CIF – 125) (CIA – 110)

The Department of Research and Human Development provides supportive services in teacher education. At the graduate level, these services include Educational Foundations, Educational Media, Research Training, and Adult Education. The Master of Education degree is offered in Educational Media and Technology. A research minor is offered at the specialist's or doctoral level.

PROGRAMS

Master of Education in Educational Media and Technology

This degree program is designed for those persons who plan to serve as media specialists or other curriculum workers in the public schools, junior colleges, or other educational agencies.

General admissions requirements for master's programs as found in Section Three of this **Bulletin** will apply. The applicant must present a combined score of 750 or above on the aptitude sections of the Graduate Record Examinations.

Curriculum Requirements	**Hours**
RED 601–Research: Its Introduction and Methodology	3
RED 602–Introduction to Educational Statistics	3
or	
CIF 632–Measuring Results in Education	3
CIF 604–Foundations in American Education	3
CIF 607–Basic Course in Curriculum Development	3
CIF 619–Utilization, Selection, and Preparation of Audiovisual Materials	3
CIF 735–Advanced Production Techniques (Audiovisual)	3
EPY 740–Advanced Educational Psychology	3
AED 604–Administration of Audiovisual Communications Programs	3
AED 620–Supervision of Instruction	3
In addition to the above required core courses, at least one course (3 hours) must be chosen from the following:	
CIE 728–Curriculum Problems in the Elementary School	3
CIS 708–High School Curriculum	3
AED 713–Curricula in Higher Education	3
In addition to the above required core courses, at least two courses (6 hours) must be chosen from the following:	
LS 660–Introduction to Information Science and Technology	3
CIF 740–Programmed Instruction	3
CIF 741–Instructional Graphics	3
CIF 742–Research in Instructional Systems Technology	3
CIE 728, CIS 708, or AED 713, if not used to meet the above requirement, may be elected	3

EDUCATIONAL RESEARCH TRAINING (RED – 135)

The program in educational research offers the student three opitons:

1. A structured minor in educational research at the doctoral level.
2. A specialist's degree. (For information see below.)
3. A choice of a number of advanced research courses as additional course electives in the student's major or minor field.

MINOR

The structured minor in educational research at the doctoral level provides for maximum flexibility in meeting the unique needs for research training in the departmental major fields. A total of twelve (12) hours plus RED 752 and 753 constitute the minimum requirements.

The required coures should be viewed as a minimum basis for training in educational research and are designed to prepare the student for more advanced study. Additional advanced courses offered in educational research are recommended for qualified students. Students desiring emphasis in psychology orientation may substitute equivalent statistics and design courses offered in the area of psychology. Such substitutions must be approved by both departments.

Curriculum Requirements*	Hours
CSS 540–Educational Statistics**	3
or	
RED 712–Computer Applications in Educational Research	3
RED 752–Advanced Correlational Methods	3
RED 753–Significance Tests and Design	3
RED 793–Advanced Educational Research	3
RED 824–Research Design in Educational Research	3
RED 830–Multivariate Analysis	3
Total	18

*Prerequisites:

(1) Basic courses consisting of RED 601, 602, and CIF 632 are recommended.

(2) A grade point average of 3.0 in RED 752 and 753 is required.

**CSS 540 should be taken if pursuing the Ph.D. degree.

Suggested Educational Research Electives	Hours
CSS 540–Educational Statistics	3
RED 718–Practicum in Educational Research	3
RED 794–Special Problems I, II, III	1
RED 824–Design in Educational Research	3
RED 891–Field Problems in Educational Research	1-9

Specialist's Degree

The specialist's degree is designed to provide advanced training in educational research and will serve three major purposes: (1) A terminal program at the specialist's level for individuals not pursuing the doctoral degree; (2) An

advanced research training program for individuals desiring specialization in research in addition to their major areas at the doctoral level; and (3) A variety of electives to meet special needs of individuals who are not seeking specialization in educational research.

Students desiring emphasis in psychology orientation may substitute equivalent statistics and design courses offered in the area of psychology. Such substitutions must be approved by both departments.

Admission to the specialist's degree program is contingent upon the student's meeting the general admission requirements of the Graduate School and scoring a minimum of 800 on the aptitude sections of the Graduate Record Examinations.

Curriculum Requirements*	**Hours**
RED 712—Computer Applications in Educational Research	3
RED 720—Measurement in Educational Research	3
RED 752—Advanced Correctional Methods	3
RED 753—Significance Tests and Designs	3
RED 793—Advanced Educational Research	3
RED 798—Research Problem	3
RED 830—Multivariate Analysis	3
Total	21
Electives	15

*Prerequisites:

(1) Basic courses consisting of RED 601, 602, and CIF 632 are recommended.

(2) A grade point of 3.0 in RED 752 and 753 is required.

**Electives in areas other than Educational Research are encouraged in order that they may provide additional experiences for the student.

Suggested Educational Research Electives	**Hours**
CSS 540--Educational Statistics	3
RED 718—Practicum in Educational Research	3
RED 791—Field Problems in Educational Research	3
RED 792—Special Problems I, II, III	1
RED 824—Design in Educational Research	1-9

DEPARTMENT OF SCIENCE EDUCATION (SCE – 380)

The Department of Science Education, recognizing the increased emphasis on the art of science teaching and the additional opportunities for individuals with advanced training in these arts, provides a program for the Master of Arts, the Master of Science, the Specialist's, the Doctor of Philosophy, and the Doctor of Education degrees in Science Education.

Any student who has successfully completed a Bachelor of Science or Bachelor of Arts degree in any area of science or combination of sciences, or has an equivalent academic preparation in the sciences, who demonstrates a minimum score on the aptitude section of the GRE of 750 for a master's, 800 for a specialist's, and 850 for the doctoral degrees, who has a grade point average

of at least 3.0 for a master's, 3.25 for a specialist's and 3.5 for the doctoral degrees, and who meets the requirements set forth by the Graduate School of the University of Southern Mississippi is eligible to pursue a program in science education. A student who for one reason or another does not meet all of the above requirements may be admitted conditionally.

In addition to the general requirments and procedures pertaining to graduate degrees as outlined in Parts III and IV of this **Bulletin**, the following requirements must be fulfilled:

MASTER'S PROGRAMS

1. Completion of forty-three (43) or forty-five (45) semester hours of graduate work.
2. A minimum of eighteen (18) semester hours in a specific science—biology, chemistry, earth and environmental sciences, or physics.
3. A minimum of six (6) hours in related sciences.
4. Demonstration of competence in the following Professional Education areas:
   (a) Psychology of learning
   (b) History and philosophy of education
   (c) Statistical methods and procedures in education
   (d) Research methods in education
   (e) Guidance and educational testing
   (f) Public school science curriculum
   (g) Problems in science teaching

Generally, the fulfillment of the above requirements will involve:

A. Nine (9) to fifteen (15) semester hours in professional education.
B. Twenty-eight (28) to thirty-six (36) semester hours in the sciences and science education.

Approximately one-third of the graduate work will be in professional education and two-thirds in the sciences. Students with sufficient background are not required to take additional courses in professional education, but will complete their programs in the sciences.

A thesis carrying four semester hours is optional and would substitute for two courses in education. The total program with thesis requires forty-three (43) semester hours graduate credit. The thesis may involve research in a particular science or research in science education.

SPECIALIST'S DEGREE

(1) Complete thirty-six (36) semester hours of graduate work beyond the master's level with
(2) a minimum of fifteen (15) semester hours in a specific science—biology, chemistry, earth and environmental sciences, and physics, plus six (6) hours in a related science, or mathematics
(3) Complete six (6) to nine (9) semester hours of work each in professional

education and science education, and

(4) Demonstrate competence in the area of professional education as listed above

(5) Demonstrate competence in thesis writing by selecting a topic, doing research, and reporting the findings.

DOCTORAL PROGRAM

1. Completion of a minimum of fifty-four (54) semester hours of graduate work above that accepted at the master's level.
2. A minimum of eighteen (18) semester hours in a specific science—biology, chemistry, earth and environmental sciences, or physics.
3. A minimum of six (6) semester hours in related sciences.
4. Competence in the areas of professional education as listed above.

Generally, the fulfillment of the above requirements will involve:

A. Nine (9) to eighteen (18) hours in professional education.

B. Twenty-four (24) or more hours in the sciences.

C. Nine (9) or more hours in science education.

In all, two-thirds or more of the graduate work will be in the sciences and science education. In planning the overall program consideration is given to the student's background and his particular interests and goals.

Additional requirements include demonstrated proficiency in educational statistics and independent research. Research, culminating in a dissertation, may deal with a problem in the student's science speciality or a problem in science education.

During a student's first or second quarter of enrollment, the department will require a written and/or oral qualifying examination. This examination is designed to assess both the student's fitness to pursue doctoral work and to assist the committee members in planning his doctoral program. A written and/or oral comprehensive examination must be taken at or near the completion of the candidate's course work. Upon acceptance of the dissertation by the candidate's committee and at least four weeks prior to graduation, a final oral examination in defense of the candidate's dissertation will be administered. The Department of Science Education furthermore requires that the candidate's research results be of a quality to be accepted for publication.

In addition to an evaluation of the student's record, tests and examinations are used for diagnostic purposes in planning programs. The Graduate Record Examinations verbal and quantitative scores and the National Teacher Examinations commons and teaching area scores should be submitted with the application for advanced graduate study.

DEPARTMENT OF SPECIAL EDUCATION (SPE – 190)

The Department of Special Education offers a variety of graduate programs leading to master's, specialist's, and doctoral degrees. Additionally,

non-majors and experienced teachers may take work leading toward certification, enrichment, and competency in areas of interest.

MASTER'S PROGRAM

This program is interdepartmental and prepares master teachers and special personnel for a variety of programs. The program may be individualized depending upon one's experience and background.

Required Coursework	Hours
RED 601	3
EPY 740 or CIF 604	3
Major Area	9
Cognate Area	9
SPE 709, 701, 694	9
Electives	36

A field study (SPE 694) is required for the master's degree.

SPECIALIST'S PROGRAM

The specialist's degree is granted upon completion of a specifically planned program of study leading to competency in an area of special education. The purpose of this program is to train highly qualified personnel in the education of exceptional children and adults. The student will specialize in either retardation, learning disabilities, emotionally disturbed, visually handicapped, special administration, or curriculum and evaluation. The program consists of a minimum of thirty (30) semester hours in a planned sequence to include the major area, cognates, research, and practicum. A field study (SPE 694) is required.

DOCTORAL PROGRAM

The doctoral program is comprehensive and places emphasis on teacher education, administration, research, and community services. (An internship is required in at least one of the above.) The candidate is expected to develop competency in each of the above areas; and his program will be based upon these as well as his experience, background, and information gathered from written and oral qualifying examinations.

All graduate degree candidates must conform to the entrance and academic requirements listed in Part III and Part IV of this **Bulletin**, indicated by the University and the Graduate School. In addition to the general requirements for admissions to the Graduate School, to be admitted to the department the candidate must earn a minimum score on the combined aptitude sections of the GRE of 750 for the master's, 800 for the specialist's, and 850 for the doctoral degrees. Details of Special Education programs may be secured from the Department of Special Education, Southern Station, Box 115.

SCHOOL OF FINE ARTS

Raymond Mannoni, Dean

E. Richard Prenshaw, Assistant Dean

Jack P. Donovan, Coordinator of Graduate Studies

The School of Fine Arts currently offers graduate programs leading to the degrees of Master of Art Education, Master of Music, Master of Music Education, Master of Fine Arts, and Master of Arts. The Master of Music degree may be earned either in applied music, church music, conducting, music history and literature, or in theory and composition. The Master of Arts or the Master of Fine Arts may be earned in theatre arts.

The School of Fine Arts offers the Doctor of Philosophy and the Doctor of Music Education degree in music education.

Prescribed curricula for master's degree programs are listed below. As can be seen, they provide some latitude and flexibility in arranging individual degree programs. Course selections must be approved by the student's advisory committee. The student's major professor will assist in every way possible, but final responsibility for following all general departmental regulations lies with the student.

Examinations and Auditions

Examinations for advisory and diagnostic purposes as well as auditions for students who plan to major in applied music are given to all new master's degree students during registration week of each quarter. Entering students should contact the Coordinator of Graduate Studies for information and schedules for these examinations. Approval of the appropriate departmental graduate faculty must be obtained before a student may major in any area of the Fine Arts

Deficiencies

The School of Fine Arts retains the right to determine deficiencies in the preparation of any graduate student, regardless of the number of course credits accumulated. The School will recommend appropriate means of removing such deficiencies.

MASTER'S DEGREE PROGRAM IN ART EDUCATION

Master of Art Education Degree	**Hours**
Supervision of Art Education Programs	3
Curriculum and Instruction in Art Education	3

Research in Art Education 3
Aesthetics (AA 700 or PHI 557) 3
Advanced Problems in Structure: 9 hours in one area and six hours selected from remaining studio offerings 15
Select one course from: CIF 709 (Social Foundations of Education), CIF 604 (Foundations in American Education), EPY 740 (Advanced Educational Psychology) 3
Trends in Current Plastic Expression 3
Thesis 6
Total. 39

MASTER'S DEGREE PROGRAMS IN MUSIC AND MUSIC EDUCATION

Prospective graduate students in music and music education must take, during their first semester of residence, diagnostic examinations in basic music theory and general music history and literature. Deficiencies may be removed by passing non-degree credit courses, MUS 720—**Graduate Music Theory** or MUS 730—**Graduate Music History**, and/or taking course work for degree credit as prescribed by the student's individual committee.

Students majoring in elementary music or vocal-choral music must demonstrate adequate proficiency in voice and piano. Students majoring in instrumental music must demonstrate proficiency in piano appropriate to previous training and a functional use of the piano in the teaching of instrumental music.

The student's committee will prescribe and approve proficiency levels in all areas for individual students.

Ensemble Participation

All graduate music students are required to participate in at least one ensemble each quarter they are in residence.

Master of Music Degree in Applied Music

Undergradute requirements for a major: (1) completion of a bachelor's degree in music with a major in performance at the University of Southern Mississippi, or (2) completion of any other bachelor's degree in music, provided that the auditioning committee is satisfied that the student is qualified both academically and in performance to pursue the Master of Music degree in applied music at the University of Southern Mississippi. A high level of performance proficiency in the major area is expected. Voice majors must demonstrate adequate knowledge of languages and diction to understand and perform the vocal repertory.

Requirements for a major: a minimum of nine (9) semester hours in the major performance area, MUS 715, **Recital**, for two (2) semester hours, and a minimum of four (4) semester hours of representative courses in literature and pedagogy related to the major performance area. Remaining course work must

include at least four (4) semester hours in music history and literature, a minimum of four (4) semester hours in music theory beyond the undergraduate requirements, and may include graduate work in appropriate related fields. The total minimum requirement is thirty-four (34) semester hours.

Master of Music Degree in Church Music

Undergraduate requirements for a major: completion of a bachelor's degree with a major in church music from the University of Southern Mississippi or an equivalent program.

Requirements for a major: the program must include MUS 559—**Church Music Colloquium**, three (3) semester hours, MUS 760—**Seminar in the History of Church Music**, three (3) semester hours, MUS 715—**Recital**, one (1) semester hour, and seven (7) semester hours in the major performance area (organ, voice, or graduate conducting). Remaining course work must include a minimum of six (6) semester hours in music theory, six (6) semester hours in music history and literature, and six (6) semester hours in religion electives. The required total is thirty-four (34) semester hours.

Master of Music Degree in Conducting

Undergraduate requirements for a major: completion of a bachelor's degree in music or music education from the University of Southern Mississippi or an equivalent program. Applicants must demonstrate advanced competency in the major performing area, above average knowledge and ability in all areas of music theory including counterpoint, orchestration, and analysis, practical knowledge of performing techniques on all instruments and voice, and sufficient ability at the piano to play simple scores. Applicants must also have had experience as a member of one or more performing organizations and at least one year of conducting experience.

Requirements for a major: a minimum of fifteen (15) semester hours in vocal and instrumental conducting and cognate fields, such as performance practices, style analysis, score reading, and performance study as approved by the student's committee. Remaining course work must be selected so that each of the following areas is included: (1) Music history and literature, (2) Music theory. Proficiency in one or more languages is recommended. Candidates are expected to prepare and conduct at least one full-length concert with a major performing organization. The required total is thirty-four (34) semester hours.

Master of Music Degree in Music History and Literature

Undergraduate requirements for a major: completion of bachelor's degree in music with a major in music history and literature at the University of Southern Mississippi or an equivalent program. Applicants must demonstrate reading ability in at least one foreign language, preferably German or French.

Requirements for a major: a minimum of nine (9) hours selected from MUS 533, MUS 534, MUS 535, MUS 536, and MUS 537; nine (9) hours in **Seminars in Music Literature** (MUS 761, MUS 762, MUS 763); a minimum of two (2) hours in **Analytical Techniques** or other appropriate music theory courses; a minimum of eight (8) hours selected from MUS 531, MUS 532, MUS

540, MUS 541, MUS 542, MUS 543, MUS 546, MUS 547, MUS 548, MUS 549, MUS 550, and MUS 559; and MUS 698—Thesis, four (4) hours. The minimum total is thirty-four (34) semester hours. **Special Studies** (MUS 792) may be taken for credit in preparation for the thesis; RED 601 and MUS 702 may be required by the student's committee.

Master of Music Degree in Theory and Composition

Undergraduate requirements for a major: completion of a bachelor's degree with a major in music theory and composition at the University of Southern Mississippi or an equivalent program which must have included counterpoint, orchestration, orginal composition, performance study throughout the program, and practical command of the piano.

Requirements for a major: a minimum of six (6) semester hours in advanced composition (APM 691, 692, 693, 694), MUS 714 or MED 698, MUS 721, MUS 722, and three (3) semester hours in applied music study. The remaining semester hours must include a minimum of six (6) semester hours in music history and literature. The required total is thirty-four (34) semester hours.

Master of Music Education Degree

Undergraduate requirements for a major: completion of an undergraduate degree in teacher education which conforms to NASM requirements.

Thesis Program	**Hours**
RED 601—Research: Its Introduction and Methodology	3
MUS 702—Bibliography for Music Research	3
MED 725—Foundations and Principles of Music Education	3
MED 726—Research in Music Education	3
MED 698—Thesis	4

The remaining course work must be selected so that each of the following areas is included: (1) music history and literature, (2) music theory, and (3) applied music study. A minimum of fifteen (15) semester hours in music education and cognate fields courses must be included in the total program of thirty-four (34) semester hours.

Non-Thesis Program	**Hours**
RED 601—Research: Its Introduction and Methodology	3
MED 725—Foundations and Principles of Music Education	3

The remaining course work must be selected so that each of the following areas is included: (1) music history and literature, (2) music theory, and (3) applied music study. A minimum of fifteen (15) semester hours in music education and cognate fields courses must be included in the total program of thirty-four (34) semester hours.

MASTER'S DEGREE PROGRAMS IN THEATRE ARTS

Master of Fine Arts Degree in Theatre Arts

The objective of the Master of Fine Arts curriculum is to develop the

educated performer by offering sound theory and intensive practical training simultaneously. Students in the Master of Fine Arts programs will elect a plan of study for specialized acting and directing or designing. A demonstration of performance abilities will be required for admission to this program.

The satisfactory completion of a minimum approved program of forty-six (46) semester hours is required for the Master of Fine Arts degree. Candidates will be required to pass an oral comprehensive examination covering the area of specialization and theatre in general. In addition, the candidate will satisfactorily complete a creative project in his major area of emphasis and defend it orally before the Theatre Arts faculty.

Master of Arts Degree in Theatre Arts

For the Master of Arts degree, the Department of Theatre Arts requires successful completion of thirty-four (34) semester hours including a thesis and its oral defense. Eight (8) of the required thirty-four hours may be chosen from graduate courses in a related field.

Theatre 601 and Theatre 606 are required of all master's candidates. The remainder of the student's degree program will be designed by the graduate committee and the student to accommodate the particular professional interests of the student.

A minimum of eighteen (18) semester hours of undergraduate course work in theatre is required of the prospective graduate student. Students with inadequate preparation may be admitted but will be expected to take undergraduate make-up courses. (See admission and general academic requirements as set forth in Parts III and IV of this **Bulletin**.)

DOCTORAL PROGRAMS IN MUSIC EDUCATION

The degrees of Doctor of Philosophy in Music Education and Doctor of Music Education are offered to candidates who pursue the course of study with distinction and who show ability to do research and scholarly study. General requirements for the Doctor of Philosophy and Doctor of Education (the Doctor of Music Education general requirements are the same as the Doctor of Education degree) are found in Part IV of this **Bulletin**. The School of Fine Arts further stipulates the following requirements.

ADMISSION: An applicant for admission to doctoral study in music education must possess a master's degree in music education, or its equivalent, from an approved institution. A complete record of previous education and experience, accompanied with recommendations from responsible persons who are personally acquainted with the applicant and his work are required to support all applications for admission to doctoral study in music education. A personal interview may be required by the School of Fine Arts. Each applicant must have at least three years' successful teaching experience. If the degree work is concerned with college administration, the applicant must have at least three years' experience in a college or university or equivalent.

RESEARCH TOOLS: Candidates for the Doctor of Philosophy degree in

music education must comply with the language requirements as specified for Doctor of Philosophy candidates in Part IV of this **Bulletin.** A candidate for the Doctor of Music Education degree is required to demonstrate proficiency in statistics or computer science. At the discretion of the graduate faculty, this candidate may be required to demonstrate a reading knowledge of one modern foreign language.

Ensemble Participation

All doctoral music students are required to participate in at least one ensemble each quarter they are in residence. All doctoral students are required to take RED 601—**Research: Its Introduction and Methodology** (or equivalent), MUS 702—**Bibliography for Music Research** (or equivalent), MED 750—**Music in General Education,** MED 825 and MED 826—**Doctoral Seminars in Music Education,** MED 791—**Research in Music Education,** MED 898—Dissertation. The remaining course work will be determined in light of the candidate's qualifying examination, his interests, and the counsel of his major professor and advisory committee. In planning this program, the following minimum distribution of graduate courses (including master's degree work) is required: thirty (30) hours in music education, nine (9) hours in musicology, nine (9) hours in music theory, nine (9) hours in professional education, three (3) hours in applied music and performance study, and the remainder of the program in approved electives. Although Part IV of this **Bulletin** states that seventy-eight (78) semester hours are required for doctoral degrees, it should be clearly understood that some candidates will be unable to receive a degree on the basis of this minimum. The distinction implied by the degree and the traditions related to it require comprehensive knowledge and demonstration of a high degree of proficiency in the major field and related areas of study, as well as the ability to conduct advanced research.

SCHOOL OF HEALTH, PHYSICAL EDUCATION, AND RECREATION

William T. Schmidt, Dean

Clarence E. McCarver, Director of Graduate Studies

The School of Health, Physical Education, and Recreation offers the Doctor of Education and the Doctor of Philosophy degrees. These degrees are interdisciplinary in nature, requiring the student to concentrate his study in one department of the School, and to demonstrate proficiency in the other two. Since only a limited number of doctoral candidates can be accepted each year, students seeking admission to either of these programs must offer evidence of a high level of academic achievement. Final selection of candidates will be made by a committee guided by the needs and policies of the School, as well as the academic and professional achievement of the applicants.

Master of Science degrees are offered in the Department of Health, the Department of Physical Education, and the Department of Recreation. Students seeking admission to one of these programs must have achieved an acceptable score on the Graduate Record Examinations, have accumulated an acceptable GPA at the baccalaureate level, and have completed the equivalent of at least an undergraduate minor in the appropriate field of study.

In order to be granted a graduate degree from the School of Health, Physical Education, and Recreation, students must satisfy all other pertinent requirements specified in this catalog.

DEPARTMENT OF HEALTH (HTH – 715)

The Department of Health offers a Master of Science degree with a major in health education or in drivers education. A minimum of thirty (30) graduate hours is required for this degree.

HEALTH PROGRAM 1 – **Master of Science Degree with a Professional Preparation Emphasis**

This degree program is designed to prepare students for college and public school teaching. Program requirements include: HTH 511, 520, 611, 615, 630, and 645. Students, with the advisement of a major professor, will elect additional courses to complete the degree. Recommended electives to complete the thirty hours (30) required for the degree may be selected from biology, computer science, education, guidance, microbiology, physical education,

psychology, recreation, and sociology. The student may elect to write and defend a thesis.

HEALTH PROGRAM 2 – **Master of Science Degree with an Emphasis in Safety and Driver Education**

This degree program is designed to prepare students to teach driver education in colleges and public schools. Twenty-one (21) hours in safety and driver education will be required: HTH 611, 640, 641, 642, 643, 644, 645. Electives to complete the thirty hours (30) required for the degree will be chosen, with the advisement of a major professor, from health courses and other recommended areas. The student may elect to write and defend a thesis.

DEPARTMENT OF PHYSICAL EDUCATION (PE – 730)

The Department of Physical Education offers the Master of Science degree with emphases as outlined below.

PE PROGRAM 1 – **Master of Science Degree Program in Physical Education with a Research-Scientific Emphasis**

This program is designed to give students a reasearch and scientific background in preparation for post-master's study. The requirements for this program are: PE 601, 602, 603, 604, 644, 680, 692, 698. Students with the advisement of the major professor, will take six (6) hours of electives to complete a total of thirty (30) required hours for the Master of Science degree. Recommended electives are: HTH 611, 720; PE 501, 609, 620; REC 602; and selected courses in chemistry, biology, or physics. Study of one foreign language is also recommended.

PE PROGRAM 2 – **Master of Science Degree Program in Physical Education with Professional Preparation Emphasis**

This program is designed to be a terminal degree program which will prepare students for public school and small college teaching. The requirements for this program are: PE 501, 604, 605, 620, 623, 642, 644, 680. Students, with the advisement of the major professor, will take six (6) hours of electives to complete a total of thirty (30) required hours for the Master of Science degree. Recommended electives are: HTH 611, 720; PE 601, 603, 609, 650, 692; AED 634, 600.

PE PROGRAM 3 – **Master of Science Degree in Physical Education with Athletic Administration and Coaching Emphasis.**

This program is designed to prepare students to coach and administer high school athletic programs. The requirements for this program are: PE 604, 605, 622, 623, 670; HTH 670. Students needing proficiency in physiology should take PE 601. Students, with the advisement of the major professor, will take twelve (12) hours of electives to complete a total of thirty (30) required hours for the Master of Science degree. Recommended courses are: PE 570, 571, 602, 603, 620, 642, 650, 671, 672, 673, 674, 675, 680.

DEPARTMENT OF RECREATION (REC – 735)

The Department of Recreation offers a Master of Science degree with a major in recreation. Students will elect a concentration in any one of five specialized programs. This degree requires the completion of a minimum of thirty (30) hours of graduate level course work. Included within the thirty (30) hours are twelve hours of core courses: REC 601, 602, 603, and 604. Other courses will be selected from those recommended for a particular area of specialization. Students may pursue an optional program designed to develop individual competency in research and writing by completing RED 698 (Thesis). The thesis may be accomplished in lieu of two of the specialized courses. All students intending to pursue a doctoral program are urged to follow the optional program in research and writing. Students who have been awarded a baccalaureate degree in a field other than recreation may be required to complete certain prerequisite courses before pursuing the master's degree.

The five areas of specialization at the master's level are:

1. Park and Recreation Administration
2. Community and Municipal Recreation
3. Park and Recreation Planning
4. Outdoor Recreation and Resource Management
5. Therapeutic Recreation

SCHOOL OF HOME ECONOMICS

Sarah L. Weaver, Dean

The Master of Science degree is offered in the Departments of Environmental Design, Family Life Services, Food and Nutrition, and Home Economics Education. The general requirements for the Master of Science degree are listed in the front of the **Bulletin.** For detailed information concerning a specific degree program, please refer to that department in the following pages.

DEPARTMENT OF ENVIRONMENTAL DESIGN (EVD – 812)

The Department of Environmental Design offers a Master of Science degree in two areas of specialization. These are clothing merchandising and clothing and textiles. Each major requires a minor field and a thesis. Admission to the program requires a minimum GRE score of 750.

Graduate work in both major and minor areas of either specialization must be preceded by undergraduate work in the chosen area. Deficiencies in the student's background may be strengthened by auditing recommended undergraduate courses.

Requirements for the Master of Science degree include a minimum of thirty-six (36) semester hours of graduate credit beyond the bachelor's degree. These must include fifteen (15) hours of clothing and textiles, twelve (12) hours in an approved minor area, three (3) hours of research methods (RED 601), and six (6) hours thesis.

After satisfactory completion of the course work, the student will take a comprehensive oral examination.

DEPARTMENT OF FAMILY LIFE SERVICES (CD – 805) (HHM – 825) (MFL – 830)

The Department of Family Life Services offers programs leading to a Master of Science degree with majors in child development and in family living. Admission to these programs requires a minimum GRE score of 750.

Graduate work in the major and minor fields of specialization must be preceded by course work sufficient to satisfy undergraduate requirements or enough related work to indicate the student's ability to do graduate work in his major and minor fields. Deficiencies in the student's background may be made up by auditing recommended undergraduate courses.

Requirements for the Master of Science degree include: a minimum of

thirty-three (33) hours of course work which include RED 601, a thesis or field study, and twelve (12) semester hours in a minor in a related field.

Upon completion of the graduate program, a comprehensive oral examination covering major and minor fields will be required to fulfill the qualifications for a degree.

DEPARTMENT OF FOOD AND NUTRITION (F&N – 815)

The Department of Food and Nutrition offers the opportunity to earn the Master of Science degree in institution management. Admission to the program requires a minimum GRE score of 750.

For a master's degree, a minimum of thirty-four (34) graduate hours is required. Eighteen (18) of these hours must be in courses numbered 600 and above. The thirty-four (34) hours include RED 601, a thesis, and twelve (12) hours in a minor field. The candidate has a choice of a thesis or field study. A comprehensive oral examination is required for both.

DEPARTMENT OF HOME ECONOMICS EDUCATION (HEE – 820)

The Department of Home Economics Education offers the Master of Science degree with a major in home economics education. This program is designed for students who desire an enriched and broadened concept of home economics and education, primarily teachers and extension home economists. Admission to the program requires a minimum GRE score of 750.

Requirements are: thirty-six (36) semester hours of course work which include RED 601, CIF 604, a thesis or a field study, and at least nine (9) additional hours in home economics education. The remaining hours may be chosen from the various areas of home economics and other graduate courses by permission of the major professor. Students have an option of a thesis or non-thesis plan. However, those preparing for college teaching or for supervisory positions in home economics are advised to write a thesis.

Those students who are interested in the Cooperative Extension Service may choose a minor in a field outside of home economics in order to meet their needs.

Upon completion of the graduate program a comprehensive oral examination covering major and minor fields will be required to fulfill the qualifications for a degree.

COLLEGE OF LIBERAL ARTS

Claude E. Fike, Dean

The College of Liberal Arts offers the Doctor of Philosophy degree in communication, comparative literature, English, history, political science, and speech and hearing sciences.

The Master of Arts and Master of Science degrees are offered in communication, comparative literature, English, foreign languages, linguisitics, geography, history, philosophy, political science, social studies (with several departments cooperating), sociology, and speech and hearing sciences.

With the approval of the major professor and the chairman of the major department, the student may choose a graduate minor from the above listed fields as well as from anthropology and religion and criminal justice. A student in the College of Liberal Arts may also choose a graduate minor in education or psychology from the College of Education and Psychology, or in economics from the School of Business Administration, always subject to the approval of the major professor and the chairman of the major department.

Various departments of the College of Liberal Arts also participate with the College of Education and Psychology in programs leading to the Master of Education degree.

Since the master's degree in social studies is normally intended for teachers, students interested in this degree should consult the Dean of the College of Liberal Arts and the Dean of the College of Education and Psychology, who will jointly arrange suitable degree programs with the appropriate chairmen.

For general academic requirements and regulations governing each of these degree programs, see Part IV of this **Bulletin**.

For specific degree requirements of each department, consult the appropriate department in Part V of this **Bulletin**.

CRIMINAL JUSTICE STUDIES (CJ – 281)

The Criminal Justice Program offers a graduate minor requiring twelve (12) semester hours of graduate work. The courses in the program will be found listed in the Course Description Section of this **Bulletin**.

LATIN AMERICAN STUDIES PROGRAM (LASP)

The Latin American Studies Program participates in a Master of Arts and a Master of Science degree in Latin American Studies from several inter-University disciplines with major emphasis in history and political science. A minimum of thirty (30) or thirty-three [33] for the Master of Science) graduate semester hours are required as follows:

Master of Arts

I. Bibliography course in either Latin American History or Political Science.
II. Nine hours of graduate courses in Latin American History or Political Science.
III. Twelve hours of graduate courses related to Latin America in any of the following fields: foreign language, geography, sociology, geology, anthropology, economics, history, and political science.
IV. Six hours of thesis.

Master of Science

I. Bibliography course in either Latin American History or Political Science.
II. Twelve hours of graduate courses in Latin American History and Political Science.
III. Eighteen hours of graduate courses related to Latin America in any of the following fields: foreign language, geography, sociology, geology, anthropology, economics, history, and political science.

A prerequisite for admission to the master's program is a baccalaureate degree accepted by the Graduate School and by the Latin American Studies Committee (LASC). Students who lack necessary background, such as reading fluency in Spanish or Portuguese, may be accepted, provided they make up these requirements prior to the completion of the program. The LASC may also make other variations which will best meet the individual student's background, needs, and desires while assuring the highest standards for the degree.

DEPARTMENT OF ANTHROPOLOGY (ANT – 286), PHILOSOPHY (PHI – 284), AND RELIGION (REL – 288)

The Department of Anthropology, Philosophy, and Religion offers a graduate minor in anthropology and religion requiring twelve (12) semester hours of graduate work, including ANT 711 and 712 and any two other courses listed under either Anthropology or Religion in the Course Description Section of this catalog. The department also offers a minor in philosophy which requires a total of twelve (12) semester hours of graduate work.

DEPARTMENT OF COMMUNICATION (COM – 208)

The Department of Communication offers the Master of Arts, the Master of Science, and the Doctor of Philosophy degrees.

Students in the master's degree programs may focus in either of two graduate areas, public address or communication. Public Address is essentially directed toward a teaching career, and should include course work from other areas of the department. The communication focus is designed for careers in public relations or other mass media related fields, and should emphasize courses in mass communication.

Students who choose to focus their work in mass communication are expected to have prior undergraduate and/or professional media training. Those not meeting this requirement can be admitted to regular status after having made up deficiencies as determined by the student's graduate advisory committee.

The Doctor of Philosophy offered by the department is an interdisciplinary communication degree program. The doctoral student takes courses in various areas of mass communication and interpersonal communication, but has the opportunity to select one area as the field of primary concentration. Additional work will be required for those focusing their work in mass communication who do not have sufficient academic or professional media training. Specific requirements are determined by the student's graduate advisory committee.

Requirements for these degrees are:

Master of Arts. A minimum of thirty-three (33) semester hours.

Master of Science. Either a thesis or non-thesis plan may be elected, subject to approval of the major professor and the department chairman. Students intending to pursue a degree higher than the master's are encouraged to write a thesis.

The thesis plan is essentially the same as for the Master of Arts except that a foreign language is not required. The non-thesis plan requires a minimum of thirty-three (33) semester hours of course work, at least twenty-two (22) of which must be in courses numbered 600 and above.

Students who seek the master's degree with a thesis requirement are given an oral comprehensive examination in the major field and are required to give an oral defense of the thesis. A written comprehensive examination is given to all graduate students pursuing the non-thesis program.

An outside minor of twelve (12) semester hours in a suitable related field may be included in the total hours required for either master's degree.

Doctor of Philosophy. The minimum course credit hour requirement for the doctoral degree is forty-eight (48) semester hours beyond the master's degree or seventy-eight (78) semester hours beyond the baccalaureate. The candidate will select one area as the field of primary concentration. A suitable dissertation, approved by his advisory committee, will be submitted in his field of major emphasis.

Doctoral candidates must elect an outside minor of twelve (12) semester

hours to be approved by the major professor and the graduate faculty.

The student should consult Part IV of this **Bulletin** for general academic requirements.

DEPARTMENT OF ENGLISH (ENG – 224)

The Department of English offers programs leading to the Doctor of Philosphy, Master of Philosophy, Master of Arts, and Master of Science degrees. English teachers in the secondary schools wishing to fulfill requirements for Class AAA certificate may do so by taking forty-five (45) semester hours of graduate credit with a minimum of twenty-one (21) semester hours in English. The student must maintain an overall B average in all graduate work.

General academic requirments for all graduate degrees are set forth in Part IV of this **Bulletin.** Specific departmental requirements for each degree are stated in information sheets obtainable at the English Office, College Hall 210. See also Master of Arts and Doctor of Philosophy degrees in comparative literature.

DEPARTMENT OF FOREIGN LANGUAGES

Candidates may study toward the attainment of either the Master of Arts or the Master of Science degree in French, German, or Spanish. Applicants for admission to the graduate program in this department should be able to demonstrate advanced undergraduate knowledge of an appropriate foreign language. Those intending to emphasize literature should have already engaged in systematic study of the literature of some linguistic area. Each degree program requires at least thirty (30) hours of graduate credit, eighteen (18) of which must be numbered 600 or above. If a minor is elected, it consists of twelve (12) hours of course work. Courses to be counted toward a major are drawn from the student's chosen language area; or, with concurrence of the student's adviser, the courses may be drawn from the group listed as Foreign Languages (FL). On special advisement courses in comparative literature may be counted toward the major.

The Master of Arts degree specifically requries proficiency in a second foreign language and the satisfactory completion of a thesis. No minor is necessary. The Master of Science degree requires a minor, but no thesis and no second foreign language. It is intended primarily for secondary school teachers and for those who do not plan to study toward a more advanced degree.

CURRICULUM IN COMPARATIVE LITERATURE

The curriculum in comparative literature offers programs of study leading to the Master of Arts and the Doctor of Philosophy degrees. Students commencing work in the Master of Arts program should have knowledge of two languages, one of which may be English. During the course of study, proficiency

in foreign languages and minor areas will be increased; therefore, it is not expected that beginning students be expert in all facets of their proposed curricula. Graduate work beyond the master's level requires knowledge of at least three languages, one of which must be English. The aim of the curriculum is to prepare students to deal intelligently and originally with any literary document and with any problem related to belles lettres.

Requirements for the Master of Arts degree include successful completion of the following:

1. Thirty-three (33) hours graduate credit eighteen (18) of which is numbered 600 or above, to include:
   a. Twelve (12) hours in the literature of one language, ancient or modern, including English.
   b. Six (6) hours of thesis. (Exceptions to this requirement may, under certain circumstances, be approved by the Director of the Curriculum.)
   c. Fifteen (15) hours in comparative literature and in approved related disciplines (e.g., the literature of another language, art, music, philosophy, history, linguistics, and others with special approval.)
2. An examination covering the student's specific course of study.

Requirements for the Doctor of Philosophy degree include successful completion of the following:

1. Seventy-eight (78) hours of graduate credit beyond the bachelor's degree, to include approximately the following courses:
   a. Thirty (30) hours in the literature of one language.
   b. Either eighteen (18) hours in the literature of a second language or nine (9) hours in the second language and nine (9) in an approved related discipline.
   c. Nine (9) hours in comparative literature.
   d. Nine (9) hours in the literature of a third language.
   e. Twelve (12) hours of electives. (One of items a., b., and d. must be English literature. Items, b., d., and e. should complement each other so as to establish a specialization for the student.)
2. A comprehensive examination covering the history of one literature, the methods of comparative literature, and the student's area of specialization.
3. A dissertation and a final defense of the dissertation.

DEPARTMENT OF GEOGRAPHY (GHY – 268)

The Department of Geography participates in programs leading to both the Master of Arts and the Master of Science degrees.

The department offers concentrations in resource development and watershed planning, urban/transportation studies, population/human resources, and cultural systems, plus other staff specialties in a variety of topical and

regional areas. All students will be expected to develop a primary interest in one of the preceding topical fields of another specialization within either physical or economic geography.

MASTER'S PROGRAMS

All students are expected to complete the following requirements:

1. Departmental Diagnostic Examination—to be taken prior to the student's first quarter of enrollment in the program—as scheduled by the department.
2. A minimum of thirty-five (35) semester hours in graduate-level geography courses with at least fifty percent of work in courses at the 600 level. With the approval of the major professor, the student may optionally take (outside the department) up to twelve (12) semester hours of cognate courses within the minimum hourly requirements.
3. Demonstrated proficiency in cartography, quantitative methods, and one other techniques course in geography. Proficiency is generally established by evidence of satisfactory completion of coursework emphasizing these techniques sometime in the student's academic career, at either the graduate or undergraduate level. Geography 411(511), 412(512), 413(513), 414(514), or 416(516) may be used to satisfy the "other techniques" requirement.
4. A thesis, which will confer five (5) semester hours credit within the minimum hourly requirements.
5. Oral and written examinations on the student's academic program and an oral defense of the thesis must be satisfactorily completed before the degree is awarded.

In addition to the above, the following requirements are specified for those students working respectively for either the Master of Arts or the Master of Science degree in geography (credit hours taken in satisfaction of either requirement cited below may not be applied toward the minimum requirements for the degree):

Master of Arts

A reading knowledge of one approved foreign language*

Master of Science

Demonstrated proficiency in statistics or in a computer-programming language suitable to the degree program and research needs of the candidate.**

*Proficiency in a foreign language may be established either by (1) completion of eleven (11) semester hours of an approved foreign language with a grade of C or better or (2) by satisfactorily passing the Princeton Examination in that language. Transfer credit will be evaluated on an individual basis.

**Proficiency in statistics may be established either by examination or by satisfactorily completing the prescribed USM two-course sequence, CSS 415 and 416 with a grade of C or better. Proficiency in a specific

computer language will be certified by an examination in that language devised and administered by the Department of Computer Science and Statistics.

DEPARTMENT OF HISTORY (HIS – 272)

The Department of History participates in programs leading to the degrees of Master of Arts, Master of Science, Master of Philosophy, and Doctor of Philosophy.

General Regulations:

The student is held responsible for following all graduate regulations. The student's major professor will help in any way possible, but the student is expected to know what is required and to take full responsibility. The procedure is explained fully in Part IV of this **Bulletin.**

MASTER'S PROGRAMS

Admission Requirements:

See pages of this **Bulletin** for general requirements which are the same as those required by the Graduate School.

Master of Arts

All students are expected to complete the following requirements:

1. A total of thirty (30) semester hours in history with fifty percent of work in courses above the 600 level.
2. History 710 and 740 (depending on his major field) at its first offering by the department.
3. A reading knowledge of one foreign language.
4. With the approval of the major professor the student may take a nine (9) hour minor within the minimum hourly requirements.
5. A thesis, which will confer six hours credit within the minimum hourly requirements.
6. After satisfactory completion of the course work and the thesis, the student will take a comprehensive oral examination, which will be given at stated times throughout the year, usually during the seventh week of a quarter. An information sheet regarding comprehensive examinations is available in the Department of History.

Master of Science

All students are expected to complete the following requirements:

1. A total of thirty-three (33) semester hours with fifty percent of work in courses above the 600 level.
2. An outside minor of nine (9) hours within the minimum hourly total of thirty-three (33) semester hours. With the approval of the candidate's committee, this outside minor may be waived for students who write a thesis.

3. History 710 or 740 (depending on his major field) at its first offering by the department.
4. A thesis (optional).
5. After satisfactory completion of the course work, the student will take a comprehensive oral examination, which will be given at stated times throughout the year, usually during the seventh week of a quarter. Comprehensive examination must be arranged when the candidate's major professor is present. An information sheet concerning comprehensive examinations is available in the Department of History.

Fields:

The Department of History presently offers the following fields for the Master of Arts and the Master of Science degrees:

1. U.S. History to 1789
2. U.S. History, 1789-1848
3. U.S. History, 1848, 1900
4. U.S. in the 20th Century
5. Medieval History
6. Latin America
7. Russia to 1917
8. Russia Since 1917
9. Britain, 1485-1760
10. Britain, 1760-Present
11. Europe, 1789-1870
12. Europe, 1815-1919
13. Europe, 1919-Present
14. A specialized field which might include the Far East, the Middle East, Africa, etc.

The Master of Arts candidate must demonstrate proficiency in the field of his thesis, plus one field in U.S. history and one in a non-U.S. field.

The Master of Science degree requires proficiency in three fields of history and the outside minor. The history fields offered must include at least one U.S. and one non-U.S. field.

MASTER OF PHILOSOPHY DEGREE

Admission Requirements:

The department requires of all entering students a minimum grade point average of 3.25 on all graduate work and a combined score of 850 on the aptitude phase of the Graduate Record Examinations.

All students are expected to complete the following requirements:

1. A minimum of thirty (30) hours of work beyond the master's degree or sixty (60) hours beyond the bachelor's degree, with fifty percent of the work in courses above the 600 level. With departmental permission a related minor of nine hours can be elected.
2. Proficiency in a foreign language is required unless the student's

master's program included such a requirement and provided that the language proficiency was demonstrated within four years of the student's admission to the Master of Philosophy program.

3. A thesis of six hours credit.
4. One quarter of full-time work on the Hattiesburg campus constitutes residence requirements for the degree.
5. A departmental qualifying examination, a written and oral comprehensive examination, and a final oral examination of the thesis are required.

The department offers the Master of Philosophy degree in U.S. History and in European History Since 1789. If a candidate seeks the degree in U.S. History he must demonstrate proficiency in either American History to 1877 or American History Since 1865. In addition he must demonstrate proficiency in either Europe 1789-1870, Europe 1870-1919, or Europe 1919 to the Present. He must also demonstrate proficiency in one of the following fields: Medieval, Latin America, Britain 1485-1760, or Britain 1760 to the Present, or one of the three European fields not selected above.

If a candidate majors in the field of European History he must demonstrate proficiency in European History from 1789 to 1914 or Europe 1870 to Present. In addition he must demonstrate proficiency in one of the following fields: Medieval, Latin America, Britain 1485-1760, Britain 1760 to Present.

DOCTORAL PROGRAM

Admission Requirement

The department requires a minimum grade point average of 3.5 on all graduate work and a combined score of 900 on the aptitude phase of the Graduate Record Examinations. Exceptions to these requirements may be made of those students who have received Master of Arts degrees from the University of Southern Mississippi, provided they received a GRE score of 800, a unanimous recommendation by their Master of Arts committees, and approval by a majority of the members of this department. Students so accepted will be classified "conditional," which status is removed by achieving a 3.5 average in eighteen (18) hours work during the first two quarters.

A minimum of seventy-eight (78) hours of course credit beyond the baccalaureate degree, which includes a minimum of three research seminars—two in the field of the major and one in the departmental minor—and History 504 and 506, must be attained by all students.

Major and Minor Requirements:

The department offers the Doctor of Philosophy degree in U.S. History and in European History Since 1789. If a candidate seeks a doctorate in U.S. History, he must demonstrate proficiency in all of American History. In addition he must demonstrate proficiency in either European History from 1789-1870 or European History from 1870 to Present. He must also demonstrate proficiency in one of the following fields: Medieval, Latin American, British History 1485-1760, or British History 1760 to Present, one of the European fields not

selected above, or a specialized field such as Russian History with the consent of the major professor and the graduate committee. He is required also to develop an outside minor in one of the social sciences or humanities in which he will take twelve (12) semester hours of work.

If a candidate majors in the field of European History, he must major in the period of Europe Since 1789. He must demonstrate proficiency in either American History to 1865 or American History Since 1865. He is also required to demonstrate proficiency in one of the following fields: Medieval, Latin American, Britain, 1485-1760 or Britain, 1760 to Present, or a specialized field such as Russian History with the consent of the major professor and graduate committee. In addition, he must establish an outside minor of twelve (12) semester hours in any one of the fields of social sciences or humanities. The outside minor in either case should be decided after consultation with the candidate's major professor and his graduate committee.

Language Requirement

Each prospective candidate for the doctoral degree must demonstrate proficiency in French and in German during his period of residence for the Doctor of Philosophy degree. Upon the recommendation of the major professor and the approval of the graduate committee, some other language may be substituted for either French or German. The first language must be completed before the start of the second year of graduate study, and the second language in the semester before the general comprehensive examinations are taken.

Doctoral Committee:

An information sheet regarding the appointment of a doctoral committee and doctoral examinations is available in the Department of History.

Dissertation

A dissertation is expected to be a mature and competent piece of writing, embodying the results of significant and original research on a subject chosen by the candidate and approved by the major professor and the graduate committee.

Upon completion and approval of the dissertation, the candidate is expected to stand satisfactorily a final examination on the dissertation and the field in which the dissertation lies.

DEPARTMENT OF POLITICAL SCIENCE (PS – 280)

MASTER'S DEGREE PROGRAM

Master of Arts. Requirements for the Master of Arts degree include: thirty (30) semester hours of course work, which includes a thesis, and a twelve (12) hour minor (optional). A reading knowledge of one foreign language is also required.

Master of Science. Requirements for the Master of Science degree include: thirty-three (33) semester hours of course work, including an outside minor of

twelve (12) hours. A thesis is optional. The Master of Science degree should be considered a terminal degree.

Course Requirements in the Major. Graduate students who expect to receive the Master of Arts degree will select three fields in political science in which to concentrate their course work, Political Theory being one of the three. Graduate students who expect to receive the Master of Science degree will, in addition, select an outside minor, with the advice and consent of their committee.

The fields of political science and the courses in each field are:

Political Theory and Methodology
520, 521, 525, 720, 721, 723

American Government Politics
501, 502, 504, 506, 507, 508, 509, 700

International Relations
530, 531, 532, 534, 535, 730, 731

Comparative Government and Politics
550, 551, 552, 553, 554, 555, 556, 558, 750, 751

Public Administration
570, 571, 572, 573, 770

Public Law
580, 581, 582, 585, 781

Comprehensive Examination. A written and oral comprehensive examination will be given at or near the end of the course work on the three fields of concentration and on the minor, if applicable.

Courses Accepted from Other Departments. The following courses will be accepted as political science for purposes of completing a major or minor if approved by the student's adviser:

ECO 501; HIS 512, 544, 545, 546

DOCTORAL PROGRAM

In addition to the general requirements listed above in this **Bulletin**, the Department of Political Science makes the following specific requirements.

Proficiency in two foreign languages is expected. The student must be able to use the first language before beginning doctoral work (the second year of graduate study), and must satisfy the requirement for the second language at least one full quarter prior to the quarter in which the comprehensive examination is taken. A dissertation based on scholarly research in original sources is required.

The qualifying examination is to be taken during the first quarter of graduate work beyond the master's degree.

Course Requirements in the Major. Doctoral candidates must specialize in four fields of political science and in one outside minor. (The fields and courses are listed under the master's program above.)

Comprehensive Examination. At the end of the course work, and following successful completion of the foreign language requirement, a written and oral comprehensive examination will be taken in the four fields of the major, and, at the student's doctoral committee's discretion, in the minor. Should the student fail the comprehensive examination in one or more fields a re-examination may be given by the department following a lapse of two quarters, or when the student has taken sufficient remedial work to warrant re-examination. Should the student fail the second examination, he will not normally be allowed to continue graduate work in the department.

DEPARTMENT OF SOCIOLOGY (SOC – 292)

The Department of Sociology's graduate program provides for the Master of Arts degree in sociology and a sociology minor in the master's and doctor's degree programs of other departments.

General regulations governing admission to the Graduate School, requirements of the College of Liberal Arts, and requirements for admission to candidacy for degree are to be found elsewhere in this **Bulletin.** The graduate student should familiarize himself with these requirements and assume responsibility for their discharge.

The major professor and departmental chairman will work out a program of study with each student electing to do graduate work in sociology.

If the student is uncertain as to whether he has satisfied undergraduate course prerequisites for any particular course, he should consult the instructor for clarification.

THE MASTER OF ARTS PROGRAM

In the major area, the Department of Sociology offers only the Master of Arts degree. General requirements correspond to the requirements of the University and its Graduate School. Policies of admission to the University, admission to the Graduate School, admission to candidacy for degree, and grading standards conform to those laid down by the University.

The Master of Arts Degree

Twenty-four (24) semester hours in sociology (including six [6] hours of thesis credit).

Twelve (12) semester hours in a minor subject approved by the Sociology Department.

At least half of the hours must be in courses numbered 600 or above.

Reading knowledge of one foreign language (proficiency as determined by Graduate School policy).

A thesis to be approved by the major professor.

A written comprehensive examination.

An oral examination by the student's committee to be based on the thesis, the major, and the minor.

DEPARTMENT OF SPEECH AND HEARING SCIENCES (SHS – 296)

The Department of Speech and Hearing Sciences participates in programs leading to the Master of Arts, Master of Science, and Doctor of Philosophy degrees. Part IV of this **Bulletin** covers the specific requirements for these degrees. At the master's level, specialization is possible in two principal areas: (1) Speech/Language Pathology and (2) Audiology. The program of study at the doctoral level is planned with specialization in one of three principal areas: (1) Speech/Language Pathology, (2) Audiology, and (3) Speech and Hearing Sciences.

MASTER'S PROGRAM

Master's Degree Requirements

Potential graduate students should refer to other sections of the **Bulletin** for information regarding admission requirements as set forth by the Graduate School and the College of Liberal Arts, and for admission to candidacy for a degree. The master's degree in Speech/Language Pathology or Audiology is a clinical degree designed to meet the academic and clinical practicum requirements for the Certificate of Clinical Competence awarded by the American Speech and Hearing Association. Unless arrangements are made in advance with the department faculty, all master's degree candidates must pursue a program meeting the academic and clinical practicum requirements in either speech pathology or audiology for the Certificate of Clinical Competence.

The master's degree requires a minimum of thirty-four (34) semester hours.

DOCTORAL PROGRAM

Doctoral Degree Requirements

Potential doctoral students will be advised individually by the department faculty. Such students are urged to become familiar with the portions of the **Bulletin** which deal with doctoral requirements.

COLLEGE OF SCIENCE

Shelby F. Thames, Dean

The College of Science offers the Doctor of Philosophy degree in biology, chemistry, microbiology, polymer science, and science education.

The Master of Arts degree is offered in the Departments of Biology, Chemistry, Geology, and Science Education, and the Master of Science degree is offered in these departments plus the Departments of Microbiology, Physics, Polymer Science, Mathematics, and Medical Technology.

The Departments of Biology, Geology, Mathematics, and Science Education, in cooperation with the College of Education and Psychology, offer programs leading to the Master of Education degree.

The Doctor of Education degree is offered in cooperation with the College of Education and Psychology by the Departments of Mathematics and Science Education.

Environmental Science courses are so constructed as to provide a minor for a master's or doctoral degree program.

For detailed information concerning a department's specific degree program, please refer to that department in the following pages. The student's attention is also directed to Part IV of this **Bulletin** for general Graduate School requirements and regulations.

DEPARTMENT OF BIOLOGY (BIO – 305)

MASTER'S DEGREE PROGRAMS

The Department of Biology participates in programs leading to the Master of Arts, Master of Science, and Master of Education degrees in biology. For these degrees a minimum of thirty (30) graduate hours is required, twelve (12) of which should be in minor area determined by the chairman of the department or the student's major professor. Eighteen (18) of these hours must be from courses numbered above 500. An acceptable problem in research must be completed by both a written thesis and an oral examination defending the thesis. Within the department the student may study biology, zoology, botany, and, in conjunction with the Gulf Coast Research Laboratory, marine biology.

The general requirements for the Master of Arts and the Master of Science degrees are found in Part IV of this **Bulletin**.

DOCTORAL PROGRAMS

The Department of Biology offers the Doctor of Philosophy degree with majors in biology, botany, zoology, and, in conjunction with the Gulf Coast Research Laboratory, marine biology. The degree of Doctor of Philosophy is conferred only in recognition of excellence in research and scholarship.

Work at the Gulf Coast Research Laboratory is recognized as resident work.

DEPARTMENT OF CHEMISTRY (CHE – 320)

MASTER'S DEGREE PROGRAMS

The Department of Chemistry participates in programs leading to the Master of Arts and the Master of Science degrees. For all master's degrees a minimum of thirty (30) graduate hours is required.

The department has the same requirements for the Master of Arts and Master of Science degrees, so the title of the degree is optional with the student. These degrees require proficiency in a language, knowledge of computers, and major courses selected by the student in consultation with a faculty graduate committee chaired by the major professor. The department will require a qualifying examination to be taken by the student during the first week upon his entrance to the Graduate School. The results of this examination will be used to determine any deficiencies which must be removed. The student will also be required to attend seminars each quarter of residence. The candidate must successfully pass a comprehensive examination in his major area which will be administered to him approximately six months before his graduation. An acceptable problem in research must be completed and terminated by a thesis and an oral examination defending the thesis.

DOCTOR OF PHILOSOPHY PROGRAM

The Department of Chemistry feels that the degree of Doctor of Philosophy is not to be conferred because of the successful completion of a pre-determined number of credit hours but only in recognition of excellence in research and scholastic attainment, However, the University requires a minimum of seventy-eight (78) hours beyond the bachelor's or forty-eight (48) beyond the master's degree.

The departmental requirements for the Doctor of Philosophy degree are those stated under the general requirements in this **Bulletin** plus the following:

1. The Department of Chemistry is offering majors in the fields of analytical, biochemistry, inorganic, organic, and physical chemistry.
2. A student, with faculty consent, may choose to bypass the master's degree as he proceeds toward the doctoral degree.

3. The course work required will be determined by the student and the graduate committee. The choice of the field of study shall rest with the student as shall the choice of the major professor after consultation of the student with each member of the graduate faculty.
4. One year of residence time will be allowed for the time spent in obtaining the master's degree if it is transferred from another school. Residence time is based on full-time study as determined by the department. Only under exceptional circumstances will a student be permitted to do any of the last two years of residence at another location. The dissertation shall be presented to the major professor for correction and criticism before the end of the quarter preceding the quarter of graduation. After approval by the major professor the candidate will circulate copies of the dissertation to his doctoral committee for correction and criticism. After the committee's approval the oral examination will be scheduled by the chairman of the doctoral committee consistent with University policy.

DEPARTMENT OF COMPUTER SCIENCE AND STATISTICS (CSS – 330)

The Department of Computer Science and Statistics participates in the program leading to a minor in statistics at the master's level. For a minor, the student must take twelve (12) semester hours which should be selected from the following courses:

	Hours
CSS 515–Methods of Mathematical Statistics I	3
CSS 516–Methods of Mathematical Statistics II	3
CSS 517–Experimental Design	3
CSS 518–Sampling Methods	3
CSS 635–Probability Theory	3
CSS 636–Statistical Inference	3
CSS 637–Least Squares Techniques	3

Students may take the following courses in the Department of Psychology and apply them to a minor in statistics:

PSY 762–Research Methods: Descriptive Statistical Methods	3
PSY 763–Research Methods: Significance Tests and Experimental Designs	3
PSY 764–Factor Analysis	3

Doctoral candidates may take nine (9) semester hours in either statistics or computer science in lieu of a second language. Specific courses will be determined by this department and by the student's graduate committee.

DEPARTMENT OF GEOLOGY (GLY – 340)

The Department of Geology participates in programs leading to the Master of Arts, the Master of Science, and the Master of Education degrees in geology.

For all master's degrees, a minimum of thirty (30) graduate hours is required, fifteen (15) of which must be in courses numbered above 600. For the Master of Arts or the Master of Science, the student must complete an original research program, submit and defend a thesis to the department; a thesis committee which supervises these activities is established when the student is formally admitted to a degree candidacy. The score on the advanced subject (in the area of science) on the Graduate Record Examinations must be submitted prior to enrollment; no student will be admitted to candidacy for the master's degree in geology who has a score of less than 900 on the combined total of aptitude sections of the Graduate Record Examinations.

Students following programs leading to the Master of Arts or the Master of Science degree in geology will be required to take a summer field course if they did not have such a course as undergraduates (this stipulation may be waived, upon application, on account of physical disability).

For the Master of Arts and the Master of Science degrees the student must take a minor of nine (9) hours in a field approved by his committee; for the Master of Arts degree, he must also demonstrate a reading knowledge of a language pertinent to the subject of his thesis.

For the Master of Education the student electing earth science as a subject matter area must take a minimum of fifteen (15) hours of graduate geology courses (up to six hours of graduate courses in allied fields may be substituted, if, in the opinion of the student's advisory committee, the courses fall in the category of "earth science").

The department has a cooperative arrangment with the Gulf Coast Research Laboratory at Ocean Springs, Mississippi. Courses in marine geological studies may be taken at the Laboratory and are generally taught in the summer.

DEPARTMENT OF MATHEMATICS (MAT – 350)

The Department of Mathematics offers programs leading to the Master of Arts, Master of Science, and Master of Philosophy degrees with a major in mathematics. In cooperation with the College of Education and Psychology, the Master of Education and the Doctor of Education degrees are offered.

For all master's degrees, a minimum of thirty (30) semester hours of graduate work is required, eighteen (18) semester hours of which must be in courses numbered above 600. At least fifteen (15) hours of the courses numbered above 600 must be in mathematics. A student who is a resident for less than three (3) quarters must complete a minimum of eighteen (18) semester hours of mathematics courses numbered above 600.

For the Master of Science degree, proficiency in a foreign language is not required. The writing of a thesis is optional with the student's advisory committee.

Before completing nine (9) hours of graduate work the student, with the help of his adviser, should outline his tentative graduate program. As a guide to the student, the courses are grouped into four areas: algebra, analysis, applied mathematics, and topology. The student, with the help of his adviser, should

obtain a suitable balance in at least three of the four areas. Details on the courses that will satisfy this requirement may be obtained from the departmental office.

A mathematics seminar is conducted each quarter for graduate students in mathematics. Its purpose is to contribute to the student's mathematical development. Each graduate student is required to attend the mathematics seminar each quarter in residence for a total of four (4) semester hours or until he graduates. A maximum of six (6) semester hours credit may be earned for participation in the seminar.

The three-quarter sequence in advanced calculus should be completed before beginning the programs leading to the Master of Arts or Master of Science degree. If not, then it must be included as a part of the program approved by the student's adviser. Only the third course in this sequence can be included as part of the thirty (30) hour minimum requirement for a master's degree.

A student must satisfy the present undergraduate requirements for a major in mathematics at the University of Southern Mississippi before beginning a program leading to a master's degree in mathematics. If a student cannot meet these requirements, he may be admitted to the Graduate School as a conditional gradute student and allowed to take work to fulfill these requirements. The hours required for a graduate degree will be in addition to this prerequisite. It should be emphasized that admission to the Graduate School does not imply acceptance of the student as a candidate for a graduate degree.

Graduate students in mathematics are required to pass an oral preliminary examination before being admitted to candidacy for a master's degree. The preliminary examination will cover fundamentals and will serve to identify the student's level of mathematical maturity. No student will be granted more than three attempts to pass the preliminary examination with at least a three-month interval between attempts. This examination will be administered not later than the fourth week of any quarter on a date arranged by the student with the student's adviser and the chairman of the Mathematics Department. A minimum of fifteen (15) semester hours of graduate courses must be registered for and completed after the examination is passed.

Candidates for either the Master of Arts or the Master of Science degree will take an oral comprehensive examination not later than the seventh week of the last quarter of residence on a date arranged by the student with the student's adviser and the chairman of the Department of Mathematics.

No student will be permitted to select a thesis topic until he has been admitted to candidacy for a master's degree. The thesis in mathematics must conform to University regulations. Four copies of the candidate's thesis are required to be distributed as follows: two copies to the Dean of the Graduate School, one copy to the chairman of the Department of Mathematics, and one copy to the student's major professor.

DEPARTMENT OF MEDICAL TECHNOLOGY (MTC – 354)

Admission

The applicant must hold a baccalaureate degree from an accredited college or university, and certification by the Board of Registry, American Society of Clinical Pathologists. In addition to the entrance requirements set forth by the Graduate School of the University of Southern Mississippi, the applicant must obtain a combined score of 800 or above on the aptitude sections of the Graduate Record Examinations. This examination may be taken after the student has enrolled in the program. The Department of Medical Technology endeavors to prepare students for positions as either education coordinators or as chief technologists in medical technology.

MASTER'S DEGREE PROGRAM

Students entering the program will be given the option of writing a thesis or of taking nine (9) hours of graduate course work beyond a basic thirty-six (36) hour course requirement. The latter option will be made by those students who do not wish to pursue a degree beyond the Master of Science. Those students who choose to write a thesis will, in addition to completing the thirty-six (36) hours of basic course work, choose a clincially oriented problem which meets the approval of a staff pathologist.

Pre-Service Teaching. A pre-service teaching experience will be part of the required activities for the program. Students will assume responsibility for various phases of instruction to fourth year medical technology students enrolled in the undergraduate program at the University. This phase of instruction will be carefully supervised by the department chairman and the education coordinator.

Internship. Upon successful completion of all course work, the student will be assigned to an affiliated hospital laboratory for his internship requirement. He will serve as assistant education coordinator or assistant chief technologist, and, where applicable, complete his research. While at the hospital, the student will be under the direct supervision of the director of laboratories and the education coordinator of that hospital.

Master of Science Degree in Medical Technology

The following is a list of the courses required of all candidates:

	Hours
CHE 622–General Biochemistry I	3
CHE 623–General Biochemistry II	3
CHE 624–General Biochemistry III	3
CHE 541–Applications of Nuclear Techniques	3
MIC 742–Principles of Immunochemistry	3
MIC 743–Immunohematology	3
GEN 731–Cytogenetics	3

CIF 607–Basic Course in Curriculum Development 3
EPY 740–Advanced Education Psychology 3
CIF 619–Utilization, Selection, and Preparation of Audiovisual Materials 3
CIF 632–Measuring Results in Education 3
MGT 625–Human Relations in Business 3

DEPARTMENT OF MICROBIOLOGY (MIC – 310)

Any student having successfully completed a Bachelor of Science or Bachelor of Arts degree in any of the biological or physical sciencies, who demonstrates a minimum score of 900 on the aptitude section of the Graduate Record Examinations, who has a grade point average of at least 3.0 in the physical or biological sciences, and who meets the requirements set forth by the Graduate School of the University of Southern Mississippi is eligible to pursue a program leading toward the Master of Science or the Doctor of Philosophy degree in the Department of Microbiology. The Department of Microbiology endeavors to prepare students for teaching and/or research positions in industrial and medical microbiology and in genetics.

MASTER'S DEGREE PROGRAM

The Department of Microbiology will require a qualifying examination to be taken during the first week upon entering Graduate School. The results of this examination will be used to determine any deficiencies the student may possess which will be required to be removed. A minimum of thirty (30) graduate hours is required, twelve (12) of which must be in an approved minor area of science. An acceptable probem in research must be completed and terminated by a written and/or oral comprehensive examination.

DOCTOR OF PHILOSOPHY PROGRAM

The Doctor of Philosophy degree in the Department of Microbiology is considered foremost to be a research degree; however, a student must demonstrate excellence in scholastic attainments as well as research capabilities. The University requires a minimum of seventy-eight (78) hours beyond the bachelor's or forty-eight (48) hours beyond the master's degree. The Department of Microbiology requires one foreign language and proficiency in statistics as set forth by the Graduate Council.

During a student's first or second quarter of enrollment, the department will require a written an/or oral qualifying examination. This examination is designed to assess both the student's fitness to pursue doctoral work and to assist the committee members in planning his doctoral program. A written and/or oral comprehensive examination must be taken at or near completion of the candidate's course work. Upon acceptance of the dissertation by the candidate's committee and at least four weeks prior to graduation, a final oral

examination in defense of the candidate's dissertation will be administered by the Department of Microbiology. The department furthermore requires that the candidate's research results be of a quality to be accepted for publication by a scholarly scientific journal.

INSTITUTE OF GENETICS (GEN – 312)

The Institute of Genetics participates in programs through the Department of Microbiology leading to the Master of Science or Doctor of Philosophy degree with a major in genetics. Requirements for degrees are outlined under the Department of Microbiology.

DEPARTMENT OF PHYSICS (PHY – 360)

The Department of Physics offers programs leading to the Master of Arts and the Master of Science degrees. For either degree, a minimum of thirty (30) hours is required. For the Master of Arts degree, a reading knowledge of either French, German, or Russian is required. For the Master of Science degree, the applicant must achieve proficiency in computer science, either through examination or by successfully completing certain computer science courses.

A thesis is required for the Master of Arts and the Master of Science degrees. Research areas from which the thesis may be chosen include magnetic resonance, impurity states in semiconductors, atomic collisons, viscous fluid flow, x-ray crystallography, and mass spectrometry.

The prospective beginning graduate student should have completed mathematics through differential equations, and in addition to introductory physics, courses in mechanics, electricity and magnetism, modern physics and optics. Students with inadequate preparation may be admitted but will be expected to take some make-up courses. Students who plan to do graduate work are expected to take the advanced physics portion of the Graduate Record Examinations.

DEPARTMENT OF POLYMER SCIENCE (PSC – 370)

MASTER'S DEGREE PROGRAM

The Department of Polymer Science offers a Master of Science degree for which a minimum of thirty (30) graduate hours in courses numbered above 600 is required. In addition an original research problem must be completed, terminated with a written thesis.

DOCTOR OF PHILOSOPHY PROGRAM

The Department of Polymer Science offers the Doctor of Philosophy degree for which the general requirements are listed in Part Four of this **Bulletin.** This degree is conferred only in recognition of excellence in research and scholarship.

DEPARTMENT OF SCIENCE EDUCATION (SCE – 380)

The Department of Science Education recognizing the increased emphasis on the art of science teaching and the additional opportunities for individuals with advanced training in these arts provides a program for the Master of Education, Master of Science, Specialist's, Doctor of Philosophy, and Doctor of Education degrees in science education.

Any student who has successfully completed a Bachelor of Science or Bachelor of Arts degree in any area of science or combination of sciences, or has an equivalent academic preparation in the sciences, who demonstrates a minimum score on the aptitude section of the GRE of 750 for a master's, 800 for a specialist's, and 850 for the doctoral degrees, who has a grade point average of at least 3.0 for a master's, 3.25 for a specialist's, and 3.5 for the doctoral degrees, and who meets the requirements set forth by the Graduate School of the University of Southern Mississippi is eligible to pursue a program in science education. A student who for one reason or another does not meet all of the above requirements may be admitted conditionally.

In addition to the general requirements and procedures pertaining to graduate degrees as outlined in Part III and IV of this **Bulletin,** the following requirements must be fulfilled.

MASTER'S PROGRAM

1. Completion of forty-three (43) or forty-five (45) semester hours of graduate work.
2. A minimum of eighteen (18) semester hours in a specific science–biology, chemistry, earth and environmental sciences, or physics.
3. A minimum of six (6) semester hours in related sciences.
4. Demonstration of competence in the following Professional Education areas:
   (a) Psychology of learning
   (b) History and philsophy of education
   (c) Statistical methods and procedures in education
   (d) Research methods in education
   (e) Guidance and educational testing
   (f) Public School science durriculum
   (g) Problems in science teaching

   Generally, the fulfillment of the above requirements will involve:

   A. Nine (9) to fifteen (15) semester hours in professional education.

B. Twenty-eight (28) to thirty-six (36) semester hours in the sciences and science education.

Approximately one-third of the graduate work will be in professional education and two-thirds in the sciences. Students with sufficient background are not required to take additional courses in professional education, but will complete their programs in the sciences.

A thesis carrying four semester hours is optional and would substitute for two courses in education. The total program with thesis requires forty-three (43) semester hours graduate credit. The thesis may involve research in a particular science or research education.

SPECIALIST'S DEGREE PROGRAM

1. Complete thirty-six (36) semester hours of graduate work beyond the master's level with
2. a minimum of fifteen (15) semester hours in specific science—biology, chemistry, earth and environmental sciences, and physics, plus six (6) hours in a related science, or mathematics
3. Complete six (6) to nine (9) semester hours of work each in professional education and science education, and
4. Demonstrate competence in the area of professional education as listed above.
5. Demonstrate competence in thesis writing by selecting a topic, doing research, and reporting the findings.

DOCTORAL PROGRAM

1. Complete fifty-four (54) semester hours of graduate work above that accepted at the master's level.
2. A minimum of eighteen (18) semester hours in a specific science—biology, chemistry, earth and environmental sciences, or physics.
3. A minimum of six (6) semester hours in related sciences.
4. Competence in the areas of professional education as listed above.

Generally, the fulfillment of the above requirements will involve:

A. Nine (9) to eighteen (18) hours in professional education
B. Twenty-four (24) or more hours in sciences.
C. Nine (9) or more hours in science education.

In all, two-thirds or more of the graduate work will be in the sciences and science education. In planning the overall program consideration is given to the student's background and his particular interests and goals.

Additional requirements include demonstrated proficiency in educational statistics and independent research. Research, culminating in a dissertation, may deal with a program in the student's science speciality or a problem in science education.

During a student's first or second quarter of enrollment, the department will require a written and/or oral qualifying examination. This examination is designed to assess both the student's fitness to pursue doctoral work and to

assist the committee members in planning his doctoral program. A written and/or oral comprehensive examination must be taken at or near the completion of the candidate's course work. Upon acceptance of the dissertation by the candidate's committee and at least four weeks prior to graduation, a final oral examination in defense of the candidate's dissertation will be administered. The Department of Science Education furthermore requires that the candidate's research results be of a quality to be accepted for publication.

In addition to an evaluation of the student's record, tests and examinations are used for diagnostic purposes in planning programs. The Graduate Record Examinations verbal and quantitative scores should be submitted with the application for advanced graduate study.

PART SIX

COURSE DESCRIPTIONS

ACCOUNTING (ACC – 605)

502—**Advanced Accounting II.** Three hours. Quarterly.

Prerequisite: ACC 401 or consent of instructor.

A brief introduction to consolidated financial statements, accounting for fiduciaries, governmental accounting, and actuarial science.

505—**Current Accounting Theory and Research.** Three hours. Quarterly.

Prerequisites: ACC 330, 401, 402, 409, or consent of instructor.

The study of current accounting problems, with special emphasis on the published bulletins (pronouncements) of professional accounting organizations.

520—**Advanced Cost Accounting and Budgeting.** Three hours. Quarterly.

Prerequisite: ACC 320.

A study of the development of accounting data for managerial use, including budgetary procedures and control.

530—**Federal Income Tax Accounting II.** Three hours. Winter, Spring.

Prerequisite: ACC 330.

A continuation of ACC 330 with emphasis on research in taxation and guides for partnerships, estates, trusts, and corporations.

550—**Accounting Systems.** Three hours. Fall, Winter, Spring.

Prerequisite: ACC 409.

A study of the nature and procedure of systems work with attention given to the design and use of mechanical and computer oriented accounting systems.

560—**Consolidated Statements and Accounting for Fiduciaries.** Three hours. Fall.

Prerequisite: ACC 402 or consent of instructor.

An in-depth study of fiduciary accounting and reports, parent and subsidiary accounting including consolidations and mergers and foreign exchange.

570—**Municipal and Governmental Accounting.** Three hours. Spring.

Prerequisite: ACC 202.

An in-depth study of the principles and standards of governmental accounting, with emphasis on classification of accounts, fund accounting, statements, and reports.

604—**Financial Accounting Analysis.** Three hours. As required.

Prerequisite: Graduate standing.

A one-semester introduction to accounting principles. Intended as a substitute for ACC 201 and ACC 202. May not be included in hours required for a master's degree.

605—**Advanced Accounting Theory.** Three hours. Winter.

Prerequisites: 15 hours of accounting above accounting principles.

An extensive study of financial accounting literature including current areas of controversy.

610—**Advanced Auditing.** Three hours. Fall.

Prerequisite: 15 hours of accounting above accounting principles including ACC 409 or equivalent.

A study of current topics in public accounting practice.

620—**Advanced Cost Accounting Problems and Controllership.** Three hours. Spring.

Prerequisite: 15 hours of accounting above accounting principles including ACC 320 or equivalent.

A study of the evolution of cost concepts and the controllership functions with emphasis on the current role of costs in managerial planning, control, and policy making.

625—**Managerial Accounting.** Three hours. Fall, Spring, Summer.

Prerequisite: Principles of Accounting.

A study of the potential managerial uses of accounting information for planning and control.

(Not to be taken by accounting emphasis students.)

630—**Tax Planning and Research.** Three hours. Summer.

Prerequisites: ACC 330 and 430 or equivalent.

A study of tax planning and reporting, the library of tax services, preparation of tax briefs, and client representation.

640—**Contemporary Accounting Problems.** Three hours. Spring.

Prerequisite: ACC 405 and 409 or consent of instructor.

A study of problem solving techniques with an emphasis on those types of problems which have appeared on recent CPA examinations.

692—**Special Problems in Accounting.** Three hours.

Individual study of specific topics in accounting.

698—**Thesis.** Six hours.

ADULT EDUCATION (CIA – 110)

540—**Methods and Materials in Adult Basic Education.** Three hours. Winter.

The uses and adaptation of various materials and techniques for teaching adults will be reviewed with specific study of the relationship of basic subject matter and teaching methods.

541—**Foundations of Reading Instruction for the Adult.** Three hours. Quarterly.

This course is designed to examine the basis of reading instructions in relation to the needs and characertistics of the non-literate adult. Topics included are: the reading process; essential reading skills; effects of economic, personal, and social forces; and a review of current literature.

542—**Methods and Materials for Teaching Adults to Read.** Three hours. Quarterly.

This course will include a study of materials and methods appropriate for teaching reading to functionally illiterate adults. Materials, diagnostic and evaluative procedures, and laboratory experiences will be included.

545—**Teaching the Disadvantaged Adult.** Three hours. Fall.

A study of the educational problems of culturally deprived and handicapped adults. Characteristics and needs are related to programs and procedures found to be successful.

590—**Special Problems in Adult Education.** One to three hours. Quarterly.

A consideration of special areas of interest in adult education. May be arranged for an individual or a group with common interests. Permission of the

department chairman required.

601—**Principles of Adult Education.** Three hours. Fall.

A survey of the history, philosophy, form, structure, and current developments in the field of adult education.

607—**Program Planning and Curriculum Development in Adult Education.** Three hours. Spring.

The design of programs, courses and other instructional units for adults is related to institutions, community groups, business and industrial groups, governmental and volunteer agencies. Emphasis is placed upon evaluation and appraisal as a built-in element in the process of curriculum development.

ALLIED ARTS (AA – 655)

700—**Aesthetics in the Arts.** Three hours. Quarterly.

A study of the formulation of aesthetic tastes. Emphasis is placed upon an analysis of artistic expression and the affective quality of experiences with the fine arts.

ANTHROPOLOGY (ANT – 286)

511—**Comparative Indo-European Studies.** Three hours. Spring.

A survey of contemporary Indo-European studies designed to illustrate the proper use of comparative method and the combination of data acquired from diverse sources, involving aracheological, historical, and linguistic research, in the solution of anthropological problems.

512—**Mythology and Folklore.** Three hours. Winter, alternate years.

The utilization of folklore and mythological data in anthropological research with special reference to the work of Georges Dumezil.

513—**Anthropological Theory.** Three hours. Spring, alternate years.

A general survey of the history of anthropology and of the major schools of anthropological theory, with particular reference to work of those anthropologists whose views are of contemporary relevance.

711—**Graduate Seminar in Anthropology.** Three hours. As needed.

Individually designed and supervised studies in general anthropology. Seminar discussion on methodology and findings.

712—**Seminar in Ethnology.** Three hours. Fall, Spring.

Individually designed and supervised studies in cultural anthropology. Seminar discussion.

APPLIED MUSIC AND ORGANIZATION (APM – 670)

601, 602, 603, 604—**Piano.** One to three hours each quarter.

611, 612, 613, 614—**Organ.** One to three hours each quarter.

621, 622, 623, 624—**Strings.** One to three hours each quarter.
631, 632, 633, 634—**Woodwinds.** One to three hours each quarter.
641, 642, 643, 644—**Brass.** One to three hours each quarter.
651, 652, 653, 654—**Percussion.** One to three hours each quarter.
661, 662, 663, 664—**Voice.** One to three hours each quarter.
671, 672, 673—**Ensemble.** One hour each.
681—**Orchestra.** One hour. May be taken three times.
682—**Band.** One hour. May be taken three times.
683—**Chorus.** One hour. May be taken three times.
691, 692, 693, 694—**Composition.** One to three hours each quarter.
701, 702, 703, 704—**Piano.** One to three hours each quarter.
711, 712, 713, 714—**Organ.** One to three hours each quarter.
721, 722, 723, 274—**Strings.** One to three hours each quarter.
731, 732, 733, 734,—**Woodwinds.** One to three hours each quarter.
741, 742, 743, 744—**Brass.** One to three hours each quarter.
751, 752, 753, 754—**Percussion.** One to three hours each quarter.
761, 762, 763, 764—**Voice.** One to three hours each quarter.
771, 772, 773—**Ensemble.** One hour each.
781—**Orchestra.** One hour. May be taken three times.
782—**Band.** One hour. May be taken three times.
783—**Chorus.** One hour. May be taken three times.
(Above offered Fall, Winter, Spring, Summer.)

ART (ART – 660)

601—**Drawing Studio.** Three to nine hours. As needed.
621—**Painting Studio.** Three to nine hours. As needed.
651—**Ceramic Studio.** Three to nine hours. As needed.

ART EDUCATION (ARE – 665)

601—**Introduction to Research in Art Education.** Three hours. Spring.
A study of current research and research techniques in the area; includes the compilation of bibliographic material and the organization of research projects.
615—**Trends in Current Plastic Expression.** Three hours. Summer.
A course designed to keep the student abreast of current trends in the plastic arts.
616—**Advanced Art Seminar for Teachers in Elementary Education.** Three hours. Quarterly.
An advanced study of the scope and sequence of art education curriculums. The coordination of art programs with sequential studies will be stressed.
620—**Adapting Selected Current Art Trends to School Practice.** Three hours. As needed.
Current art trends are identified and selections of them are developed in terms of philosophies, practitioners, background, and techniques. Students will

identify, select, analyze, and develop these into studio practice and school art lessons.

621—**Crafts: Jewelry Design for Teachers.** Three to nine hours. As needed.

A course designed for teachers to study the concepts inherent in visual forms as pertaining to the jewelry crafts. Study is grounded in the disciplines associated with the techniques, media, and aesthetics of metal.

625—**Supervision of Art Education Programs.** Three hours. Fall.

A study of the problems involved in the supervision of public school art programs in grades K through twelve.

626—**Curriculum and Instruction in Art Education.** Three hours. Winter.

A study of the art curriculums and instructional programs in the public schools in grades K through twelve.

691—**Research in Art Education.** One to six hours.

Prerequisite: Approval of the major professor.

692—**Special Studies in Art Education I, II, III.** One to three hours each. As needed.

697—**Independent Study and Research.** One to twelve hours. As needed.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours. Quarterly.

A conventional thesis, or a catalogued exhibition, or an exhibition with a supporting paper.

BIOLOGY (BIO – 305)

501—**History of Biology.** Two hours. As needed.

Lectures and papers concerning the development of biological sciences.

510—**Electron Microscopy.** Three hours. As needed.

Three hours lecture, three hours laboratory per week.

Theory and use of the electron microscope and associated instrumentation, and darkroom techniques.

511—**Histology.** Three hours. As needed.

Three lecture periods and two hours laboratory per week.

Prerequisite: 12 hours of biology.

Microscopic anatomy of mammalian organ systems.

520—**Embryology I.** Three hours. Winter.

Two lecture periods, four hours laboratory per week.

Prerequisites: BIO 320 and 321.

Embryology of vertebrates, emphasizing the frog. Maturation, fertilization, cleavage, origin and development of germ layers, histogenesis, and organogenesis.

521—**Embryology II.** Three hours. Spring.

Two lecture periods, four hours laboratory per week.

Prerequisite: BIO 520.

The embryological development of vertebrates, especially the chicken and the pig.

522—**Experimental Embryology.** Three hours. As needed.
Two hours lecture, four hours laboratory per week.
Prerequisites: BIO 520 and 521.
Factors which activate or regulate developmental processes.

523—**Protozoology.** Three hours. As needed.
Two lecture periods, four hours laboratory per week.
Prerequisites: BIO 101 and 102.
Introduction to parasitic and free-living protozoa.

524—**Human Protozoology.** Three hours. Winter, Summer.
Two hours lecture, four hours laboratory per week.
Prerequisites: BIO 101 and 102.
Life histories, epidemiology, and diagnostic characteristics of protozoans parasitic in man.

525—**Human Helminthology.** Three hours. Fall, Summer.
Two hours lecture, four hours laboratory per week.
Prerequisites: BIO 101 and 102.
Life histories, systematics, and host relationships of helminths of medical significance.

526—**Medical Entomology.** Three hours. Winter.
Two hours lecture, four hours laboratory per week.
Prerequisite: Consent of instructor.
Anthropod vectors and agents of disease.

530—**Mammalian Physiology I.** Three hours. Fall.
Three hours lecture, two hours laboratory per week.
Prerequisites: BIO 101, 202, 320, and 321.
Functioning of major mammalian systems emphasizing interrelationships and regulation.

531—**Mammalian Physiology II.** Three hours. Winter.
Three hours lecture, two hours laboratory per week.
Prerequisite: BIO 530.
Study of system function, coordination, and control.

532—**Comparative Animal Physiology I.** Three hours. Winter, Spring.
Two hours lecture, four hours laboratory per week.
Prerequisites: 12 hours of biology, 9 hours of chemistry.
Comparison of systems and adaptations of vertebrates.

533—**Comparative Animal Physiology II.** Three hours. Spring, Summer
Two hours lecture, four hours laboratory per week.
Prerequisite: BIO 532.
Comparison of vertebrate function in relation to the environment.

534—**Endocrinology.** Three hours. Winter.
Three hours lecture per week.
Prerequisite: BIO 101, 202, or consent of instructor.
Survey of the endocrine glands and their role in regulating the physiological processes of mammals.

536—**Invertebrate Zoology I.** Three hours. Fall.
Two hours lecture, four hours laboratory per week.
Prerequisites: BIO 101 and 102.
Survey of Invertebrate Phyla Protozoa to Annelida.
537—**Invertebrate Zoology II.** Three hours. Winter.
Two hours lecture, four hours laboratory per week.
Prerequisite: BIO 536.
Survey of Invertebrate Phyla through Hemichordata.
538—**Entomology.** Three hours. Fall.
Two hours lecture, four hours laboratory per week.
Structural adaptations, classification, life histories and habits, and the economic importance of insects.
540—**Ichthyology.** Three hours. Fall.
Two hours lecture, four hours laboratory per week.
Prerequisites: BIO 101, 102, and 202.
Collection, preservation, and identification of local fishes and fish-like vertebrates, with emphasis on fresh water. Field work when possible.
541—**Ornithology.** Three hours. Spring.
Two hours lecture, four hours laboratory and field work per week.
Prerequisites: BIO 320 and 321 recommended.
Morphology, taxonomy, life history, distribution, evolution, and adaptations of birds.
542—**Mammalogy.** Three hours. Winter.
Two hours lecture, four hours laboratory and field work per week.
Prerequisites: BIO 320 and 321 recommended.
Morphology, taxonomy, life history, distribution, evolution, and adaptations of mammals.
543—**Principles of Nomenclature.** Two hours. As needed.
Two hours of lecture per week.
Prerequisite: Consent of instructor.
Discussions and problems of biological nomenclature.
548—**Introductory Mycology.** Three hours. Winter.
Two hours lecture, four hours laboratory per week.
Prerequisite: Consent of instructor.
Taxonomy, physiology, and biochemistry of fungi.
549—**Introductory Phycology.** Three hours. As needed.
Two hours lecture, four hours laboratory per week.
Prerequisite: Consent of instructor.
Taxonomy, physiology, and biochemistry of the algae.
550—**Plant Anatomy.** Three hours. As needed.
Two hours lecture, four hours laboratory per week.
Prerequisite: BIO 102.
A study of the anatomy of vascular plants.
551—**Morphology of Non-Vascular Plants.** Three hours. Winter.
Two hours lecture, four hours laboratory per week.
Prerequisites: BIO 101, 102.

Life cycles, evolution, and diagnostic characteristics of representative algae, fungi, lichens, liverworts, and mosses.

552—**Morphology of Vascular Plants.** Three hours. Spring.

Two hours lecture, four hours laboratory per week.

Prerequisites: BIO 101 and 102.

Life cycles, evolution, and diagnostic characteristics of representative ferns, fern allies, and seed plants.

553—**Aquatic and Marsh Plants.** Three hours. Fall, Summer.

Two hours lecture, four hours laboratory and field work per week.

Collection, identification, and ecology of aquatic and marsh plants of fresh and brackish water. Field and laboratory investigations.

554—**Plant Physiology.** Three hours. As needed.

Two hours lecture, four hours laboratory per week.

Prerequisites: General and organic chemistry recommended.

The basic physiological processes of green plants.

555—**Economic Botany.** Three hours. As needed.

Four hours lecture per week and field trips.

Prerequisite: BIO 102 or consent of instructor.

Origin, distribution, and significance of plants most important to man.

556—**Plant Pathology.** Three hours. As needed.

Two hours lecture, four hours laboratory per week.

Prerequisite: BIO 102.

Taxonomy, physiology, and control of economically important plant pathogens.

557—**Taxonomy of Higher Plants.** Three hours. As needed.

Two hours lecture, four hours laboratory per week.

Prerequisites: BIO 101 and 102.

The classification of seed plants.

560—**Biogeography.** Two hours. Winter.

Two lectures per week.

A descriptive and analytical study of the distribution of plants and animals.

561—**Ecology I.** Three hours. Fall.

Two hours lecture, four hours laboratory or field work per week.

Prerequisite: Consent of instructor.

Interrelations between organisms and their environment. Biogeochemical cycles and nutrient distribution. Limiting factors, productivity, and energy transfer in food chains. Ecological succession.

562—**Ecology II.** Three hours. Winter.

Two hours lecture, four hours laboratory or field work per week.

Prerequisite: BIO 561.

Ecological effects of temperatures, light, rainfall, salinity. Relationship of respiration and osmoregulation to environmental factors. Population growth.

565—**Freshwater Biology.** Three hours. Fall, Summer.

Two hours lecture, four hours laboratory per week.

Prerequisite: Consent of instructor.

Collection, identification, and ecology of aquatic organisms significant to the assessment of water quality.

566—**Limnology.** Three hours. Spring.

Lectures, laboratories, and field trips.

Prerequisites: BIO 561 and 562 strongly recommended, and consent of instructor.

The physical, chemical, and biological conditions in lakes, ponds, and streams.

567—**Introduction to Biological Oceanography.** Three hours. As needed.

Two hours lecture, four hours laboratory per week.

Prerequisites: BIO 561 and 562.

Ocean basin topography, distribution of bottom sediments, and physical and chemical characteristics of sea water.

570—**Ecology of Parasitic and Vector-Borne Diseases.** Two hours. As needed.

Two hours lecture per week.

Prerequisite: Consent of instructor.

Transmission and pathogenesis of parasitic and vector-borne diseases in their ecological frameworks.

575—**Plant Ecology.** Three hours. As needed.

Three hours lecture and field trips.

Relationship of plants to their environment.

593—**Field Biology I, II, III, IV.** Two hours each for a maximum of six hours.

Prerequisite: Consent of instructor.

Ecological and taxonomic studies of the fauna and flora of a variety of habitats. Offered between quarters as 4 to 6 field trips.

692—**Biological Problems I, II, III, IV.** Two hours each for a maximum of six hours. As needed.

Given only by special arrangement.

Courses in special techniques, designed for majors with a need for certain basic techniques as tools for research.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

703—**Advanced Botany.** Three hours. As needed.

Eight hours laboratory-discussion and/or field trips per week.

The general physiology and ecology of seed plants.

704—**Biological Photography.** Two hours. As needed.

One hour lecture and two hours laboratory per week.

Techniques of biological photography.

705—**Analytical Methods in Biological Research.** Three hours. As needed.

Four hours lecture and laboratory combined.

Prerequisite: Consent of instructor.

Special techniques of data gathering and interpretation.

712—**Cytology.** Three hours. Winter.

Four hours lecture per week.

Prerequisites: 9 hours of chemistry, 9 hours of physics, or consent of the instructor.

Cellular morphology, metabolism, growth, differentiation, and reproduction.

716—**Cell Ultrastructure.** Three hours. As needed.

Four hours lecture per week.

Prerequisite: Consent of instructor.

Structure and function of cells and cell organelles at the sub-cellular level.

721—**Advanced Systematic Herpetology.** Three hours. Winter.

Two hours lecture and four hours laboratory per week.

Prerequisites: BIO 339 and consent of instructor.

Systematics, natural history, distribution, and economic importance of reptiles and amphibians.

726—**Advanced Systematic Ichthyology.** Three hours. Fall.

Two hours lecture and four hours laboratory per week.

Prerequisites: BIO 440 or 540 and consent of instructor.

Systematics, natural history, distribution, and economic importance of fishes.

727—**Speciation.** Two hours. Fall.

Two hours lecture per week.

Prerequisite: GEN 402 or 502.

Current concepts of phylogeny and origin of the species.

728—**Planktology.** Three hours. Spring.

Two hours lecture and four hours laboratory or field work per week.

Prerequisite: BIO 436 or 536.

The morphological adaptations and life histories of plankton.

729—**Invertebrate Physiology.** Three hours. As needed.

Two hours lecture and four hours laboratory per week.

Prerequisite: Consent of instructor.

General principles of invertebrate physiology with emphasis on growth and reproduction.

730—**Helminthology.** Three hours. As needed.

Two hours lecture and four hours laboratory per week.

Prerequisite: BIO 424 or 524 and 425 or 525.

Systematics, morphology, and host-relationships of helminths.

731—**Physiology of Marine Animals.** Three hours. As needed.

The environmental physiology of marine animals.

732—**Seminar in Animal Behavior.** Two hours. Fall.

Special topics in ethology, in areas of individual interest.

733—**Seminar in Physiology.** Two hours. As needed.

Special topics in physiology in areas of individual interest.

734—**Experimental Endocrinology.** Three hours. Spring or Summer.

Two hours lecture and four hours laboratory.

Prerequisite: BIO 434 or 534.

Experimental approach to the study of hormones, utilizing techniques of bioassay and surgery.

739—**Invertebrate Embryology.** Three hours. Spring.

Two hours lecture and four hours laboratory or field work per week.

Prerequisite: Consent of instructor.

The embryology of invertebrates, emphasizing that of marine animals.

750—**Advanced Taxonomy of Seed Plants.** Three hours. As needed.

Two hours lecture and four hours laboratory per week.

Prerequisites: BIO 457 or 557.

Experimental approaches to problems in plant taxonomy. Laboratory devoted to classification of seed plants.

752—**Experimental Phycology.** Three hours. As needed.

Four hours lecture per week.

Prerequisite: Consent of instructor.

Experimental studies in phycology, with emphasis on special techniques of study.

754—**Experimental Mycology.** Three hours. As needed.

Four hours lecture per week.

Prerequisite: Consent of instructor.

Experimental studies in mycology, utilizing special techniques of study.

760—**Topics in Marine Biology.** Two hours. Fall or Spring.

Prerequisite: Consent of instructor.

Special topics in marine physiology and biochemistry.

763—**Fisheries Biology.** Three hours. Winter.

Two hours lecture and four hours laboratory or field work per week.

Prerequisites: BIO 440 or 540, and BIO 466 or 566 highly recommended.

Ecology and conservation of fishes.

765—**Biological Oceanography.** Three hours. Spring or Summer.

Two hours lecture and four hours laboratory per week.

Prerequisite: BIO 462 or 562.

The sea as a biological environment.

767—**Marine Ecology.** Three hours. Spring.

Two hours lecture and four hours laboratory or field work per week.

Prerequisite: BIO 462 or 562.

The physical and chemical nature of the marine environment and the ecology of marine organisms.

768—**Aquaculture.** Three hours. Spring or Summer.

Two hours lecture and four hours field work per week.

Prerequisite: Consent of instructor.

Principles of production of aquatic organisms in natural and artificial environments. Techniques of propogation, harvesting, disease control and water quality management are included.

789—**Biology Seminar I, II, III.** One hour each. As needed.

The presentation of current concepts in special areas of individual interest.

791—**Research in Biology.** Credit to be arranged.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Three hours.

793—**Research in Zoology.** Credits to be arranged for a maximum of six hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

898—**Dissertation.**

COURSES TAUGHT AT THE GULF COAST RESEARCH LABORATORY IN OCEAN SPRINGS BY THE GULF COAST RESEARCH LABORATORY STAFF

581—**Marine Vertebrate Zoology.** Six hours.

Prerequisites: 12 hours in biology, including comparative anatomy.

A formal lecture and laboratory survey of all marine chordates, including the lower subphyla, the fishes, reptiles, mammals, and shore birds.

583—**Marine Invertebrate Zoology I.** Six hours.

Prerequisite: Applicant should have a strong background in zoology.

The lower marine invertebrates, especially those of Mississippi. Emphasis on morphology, distribution, and ecology of the phyla from Protozoa through Lophophorata. Lecture, laboratory, and field work are included.

584—**Marine Invertebrate Zoology II.** Six hours.

Prerequisite: BIO 583.

The higher marine invertebrates, especially those in Mississippi. Emphasis on morphology, distribution, and ecology of the protostome and deuterostome phyla from Mollusca through the protochordates. Lecture, laboratory, and field work is included.

585—**Parasites of Marine Animals.** Six hours.

Prerequisite: Consent of instructor.

Parasites of marine animals, with emphasis on morphology, taxonomy, life histories, and host-parasite relationships. Lecture, laboratory, and field work are included.

588—**Introduction to Marine Zoology.** Four hours.

Prerequisite: 12 hours of biology.

A general introduction to the marine environment with emphasis on local fauna. Weekly boat trips will be made for the purpose of collecting specimens for laboratory study. Lectures by guest scientists and visits to local areas are included.

589—**Marine Botany.** Four hours.

Prerequisites: General botany and plant taxonomy.

A survey, based upon local examples, of the principal groups of marine algae, treating their structure, reproduction, distribution and general biology; including a survey of the common maritime flowering plants, their identification and ecology.

781—**Marine Fisheries Biology.** Six hours.

Prerequisites: Strong background in zoology and one year of college mathematics.

An introduction to the general principles of the subject including the simpler statistical procedures, collection of production statistics, and a general review of

the world fisheries with special emphasis on the United States.

782—**Research in Marine Biology.** Credits to be arranged.

783—**Biological Electron Microscopy I.** Three hours.

Prerequisite: Consent of instructor. Offered only to graduate students conducting dissertation research in ultrastructure at the Gulf Coast Research Laboratory.

A study of tissue preparation, theory, and techniques of ultramicrotomy, and an introduction to the fundamentals of electron microscopy.

784—**Biological Electron Microscopy II.** Three hours.

Prerequisite: BIO 783.

A study of special techniques and the operation and maintenance of an electron microscope.

785—**Marine Microbiology.** Five hours.

Twelve hours of lecture and laboratory per week.

Prerequisites: General microbiology or consent of instructor.

Examination of microbial flora of representative environments. Taxonomy, physiology, economic significance, and effect upon biological communities.

786—**Advanced Problems in Marine Microbiology.** Credits to be arranged.

Prerequisites: BIO 785 and consent of instructor.

Supervised research problems and projects selected to meet the needs of the graduate students of microbiology or marine biology.

787—**Marine Phycology.** Credits to be arranged

Prerequisite: Consent of instructor.

Areas of concentration according to seasonal activities and needs or interest of the student.

BUSINESS EDUCATION (BED — 105)

552—**Philosophy of Vocational Business Education.** Three hours. Winter.

History and philosophy of vocational education and vocational business education; changing concepts resulting from Federal legislation; changing nature of office systems and occupations; changing employment opportunities and consequent changes in procedures and techniques of vocational education and vocational business education.

553—**Coordination of Vocational Office Occupations Programs.** Three hours. Summer.

Problems of the coordinator in the development of programs to meet the needs of employed youth and adults in vocational office occupations programs.

560—**Office Management.** Three hours. Fall, Winter, Spring.

A study of the principles of management as applied to office work, covering office organization, supervision, layout, supplies, machines, personnel, office forms and reports, and office services.

580—**Research and Report Writing.** Three hours. Summer.

The study of concepts and methods of business research and style in business reports; a comprehensive coverage of problems encountered in researching business data and in reporting findings. Practical experiences will be provided in

gathering, organizing, analyzing, and interpreting business data and in the presentation of findings in effective written report form.

604—**Foundations in Business Education.** Three hours. As needed.

Examination and analysis of the history and philosophy of business education.

608—**Curriculums in Business Education.** Three hours. Summer.

Curriculum construction; content organization; selection and preparation of instructional materials; and application of instructional techniques.

651—**Principles of Business Education.** Three hours. Spring.

Principles and objectives of business education in junior high school, high school, and junior college and other post-high school institutions; guidance; qualifications and professional activities of the business teacher; and public relations with business.

652—**Seminar in Business Education.** Three hours. Summer.

An intensive study of specific problems in business education, and a survey of literature pertaining to the problems.

653—**Improvement of Instruction in Bookkeeping and Related Basic Skills.** Three hours. As needed.

Problems and procedures in the mastery of bookkeeping and related knowledges and skills; materials and teaching procedures in bookkeeping and business mathematics; teaching problems emphasized; significant research relating to methodology and testing examined.

654—**Improvement of Instruction of Basic Business.** Three hours. As needed.

Objectives, teaching procedures, instructional materials, and other related problems of social business subjects such as general business, economic geography, business law, consumer economics, business organization and management, salesmanship, economics, and other nontechnical business subjects. Significant related research is studied.

655—**Improvement of Instruction in Typewriting and Related Skills.** Three hours. As needed.

Teaching procedures basic to vocational proficiency in typewriting and related skills; available instructional materials; measurement of skills; standards of achievement; teaching problems of students in class; review of related research.

656—**Improvement of Instruction in Shorthand and Transcription.** Three hours. As needed.

Problems in the development of occupational proficiency in shorthand; available instructional materials; transcription problems; integration of shorthand, typewriting, English, and style; achievement tests; standards of achievement. Special attention to teaching problems of students in the class. Evaluation of related literature and research.

669—**Measurement and Evaluation in Business Education.** Three hours. Fall.

Concept of evaluation; tools of evaluation; evaluation in the different business subjects; construction of tests; selection, administration, and scoring of tests; determination of grades; evaluation on the job (National Business Entrance Tests, Civil Service, et cetera).

670—**Problems in Vocational Cooperative Office Education.** Three hours. As needed.

Analysis of problems in administering cooperative office education programs.

691—**Research in Business Education.** One to nine hours.

692—**Special Problems I, II, III.** One hour each.

Prerequisite: 9 semester hours of advanced courses in business education.

A problem study to be approved by the department chairman to develop knowledge and facility in a field of interest of the student. Preparation of a scholarly paper is required.

694—**Field Problems.** Three hours. Arranged.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours. Credit is deferred until thesis is completed.

701—**Seminar in Business Education.** Three hours. As needed.

Analysis and evaluation of significant research studies in the field of business education.

750—**Business Education in the Junior College.** Three hours. As needed.

A study of forces affecting the junior college business curricula, nature, and philosophy, programs, relationship to community and business, and trends. Significant related research is studied.

760—**Administration and Supervision of Business Education.** Three hours. As needed.

Study of the principles, agencies, and general techniques of effective administration and supervision of business education in junior high, senior high, and evening high schools, and in colleges.

780—**Readings in Business Education.** Three hours. As needed.

Readings in selected areas of interest including both periodical literature and research, with a formal organization and presentation of findings.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a research problem and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Research Problems.** Three hours.

CHEMISTRY (CHE — 320)

502—**Chemistry of the Atmosphere.** Four hours. As needed.

Three lecture periods or equivalent and one laboratory session per week.

Prerequisite: CHE 312.

A course relating natural atmospheric chemical conditions to the chemical changes wrought in the atmosphere by man's environmental pollution. Topics such as the natural radiocarbon cycle, atmospheric photochemistry, cosmic ray

influences, weather patterns, combustion product pollutants, health hazards, greenhouse effect, detection and measurement of atmospheric constituents, etc., will be examined.

503—**Industrial Chemistry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: Permission of the instructor.

A study of the more important chemical processes used in industry. Plant site visits and frequent lectures by representatives from the chemical industry will constitute an important part of this course.

511—**Instrumental Analysis.** Four hours. Spring.

Three lecture periods or equivalent and two laboratory sessions per week.

Prerequisites: CHE 353 and 312.

A course in the theory and use of analytical techniques such as colorimetry, polarimetry, ultraviolet, visible and infrared spectrophotometry, gas chromatography, mass spectroscopy, nuclear magnetic resonance spectroscopy, etc.

521—**Introduction to Biochemistry.** Four hours. Fall, Summer.

Three lecture periods or equivalent and one laboratory session per week.

Prerequisite: CHE 353.

Subjects discussed include proteins, enzymes, nucleic acids, biological oxidations and photosynthesis.

522—**Intermediary Metabolism.** Four hours. Winter, Summer.

Three lecture periods or equivalent and one laboratory session per week.

Prerequisite: CHE 521.

This course is designed to acquaint the student with the major metabolic cycles and pathways. Energy considerations and the interrelation of these pathways are included.

541—**Applications of Nuclear Techniques.** Four hours. As needed.

Three lecture periods or equivalent and one laboratory session per week.

Prerequisite: Permission of the instructor.

Nuclear techniques applied to the solution of biological, chemical environmental, geological, physical, health, and medical problems. Training consists of radioisotope handling, radiation detection, radiation shielding, nuclear design problems, tracer techniques, and radiological health monitoring. Numerous radiation sources are used and studied.

551—**Qualitative Organic Analysis I.** Two hours. Winter.

One lecture period or equivalent and one laboratory session per week.

Prerequisite: CHE 353.

The systematic identification of pure organic chemicals.

552—**Qualitative Organic Analysis II.** Two hours. Spring.

One lecture period or equivalent and one laboratory session per week.

Prerequisite: CHE 551.

A study of the analysis of mixtures, with emphasis on chromatographic separation techniques and spectroscopic methods of analysis.

561, 562, 563—**Physical Chemistry.** Three hours each. Fall, (561); Winter, (562); Spring (563).

Three lecture periods or equivalent and one laboratory session per week.

Prerequisites: CHE 353 and MAT 277.

A mathematical treatment of the laws governing chemical and physical changes. Topics treated are chemical thermodynamics, kinetics, surface and interface phenomena, nuclear chemistry, quantum chemistry, and spectroscopy. Emphasis is placed on problem solving in each of these areas.

601—**Introductory Structural Chemistry.** Three hours. Fall.

Three lecture periods or equivalent per week.

Prerequisite: Permission of the instructor.

A study of symmetry including group theory and point group designation, stereochemistry, and the origin of spectra.

602—**Spectral Elucidation of Structure.** Three hours. Winter.

Three lecture periods or equivalent per week.

Prerequisite: Permission of instructor.

Applications of spectra to structural determination. Topics include infrared, raman, and ultra violet spectroscopy, nuclear magnetic resonance spectrometry, mass spectrometry, optical rotatory dispersion, and circular dichroism.

603—**Introduction to Kinetics and Synthesis.** Three hours. Spring.

Three lecture periods or equivalent per week.

Prerequisite: Permission of the instructor.

An introduction to kinetics, synthesis (a general approach to both inorganic and organic), and separations.

610—**Problems in Analytical Chemistry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: Permission of the instructor.

An intensive study of analytical chemistry, designed to bring a student who lacks an adequate preparation in this area, but who has a B.S. degree in some biological or physical science, to such a level of competency in analytical chemistry that he may with confidence enroll in higher-numbered graduate courses in analytical chemistry. (Credit for this course will not be counted toward the stated credit requirements for a graduate degree in chemistry.)

611—**Advanced Analytical Chemistry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 411 or permission of instructor.

This course consists of sampling techniques, equilibria and activity, chemical and physical separations, and chemical methods of analysis.

612—**Advanced Chemical Analysis.** Three hours. Fall.

Three lecture periods or equivalent per week.

Prerequisite: CHE 611.

Theory and applications of quantitative chemical methods for inorganic and organic analysis. Topics include nonaqueous acid-base theory, functional group analysis, reaction rates in analysis, complexometric methods and organic reagents for metals. Emphasis on recent advances.

620—**Problems in Biochemistry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: Permission of the instructor.

An intensive study of biochemistry designed to bring a student who lacks an

adequate preparation in this area, but who has a B.S. degree in some biological or physical science, to such a level of competency in biochemistry that he may with confidence enroll in higher-numbered graduate courses in biochemistry. (Credit for this course will not be counted toward the stated credit requirements for a degree in chemistry.)

621—**Advanced Biochemistry.** Three hours. Fall.

Three lecture periods or equivalent per week.

Prerequisite: Permission of instructor.

Selected topics include mechanisms of drug actions; biological control mechanisms; the biosynthesis of proteins, nucleic acids, terpenes, and steroids; and structural elucidations of macro-molecules.

622—**General Biochemistry.** Three hours. Fall.

Three lecture periods or equivalent per week.

Prerequisite: CHE 353.

An intensive study of modern biochemistry. Topics covered include the biochemistry of carbohydrates, lipids, proteins, nucleic acids, porphyrins and chlorophyll.

623—**General Biochemistry II.** Three hours. Winter.

Three lecture periods or equivalent per week.

Prerequisite: CHE 622.

An introduction to the major metabolic pathways and cycles including metabolism of carbohydrates, lipids, amino acids, purines and pyrimidines, with emphasis on the interrelationships of these pathways.

624—**General Biochemistry III.** Three hours. Spring.

Three lecture periods or equivalent and one laboratory session per week.

Prerequisite: CHE 623.

The genetic aspects of metabolism and protein synthesis are discussed. Also included is a discussion of specialized tissue, body fluids, vitamins and hormones and their role in metabolic control.

630—**Problems in Inorganic Chemistry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: Permission of the instructor.

An intensive study of inorganic chemistry designed to bring a student who lacks an adequate preparation in this area, but who has a B.S. degree in some biological or physical science, to such a level of competency in inorganic chemistry that he may with confidence enroll in higher-numbered graduate courses in inorganic chemistry. (Credit for this course will not be counted toward the stated credit requirements for a graduate degree in chemistry.)

631—**Advanced Inorganic Chemistry.** Three hours. Winter.

Three lecture periods or equivalent per week.

Prerequisite: Permission of the instructor.

Selected topics include the examination of chemical and physical phenomena as related to bonding and their effects on stereochemistry, compounds with unusual covalent bonding schemes, inorganic polymers, modern acid-base concepts, chelates, rare earths and transition metals with emphasis given to the current literature.

632—**Inorganic and Organic Preparations.** Two or four hours. As needed.
One lecture period and two or four laboratory sessions per week.
Prerequisite: Permission of instructor.

A course designed to familiarize the student with specialized synthetic techniques in both inorganic and organic chemistry which are not encountered at the undergraduate level. These include inert atmosphere, vacuum line and non-aqueous system work as well as large scale preparations.

650—**Problems in Organic Chemistry.** Three hours. As needed.
Three lecture periods or equivalent per week.
Prerequisite: Permission of the instructor.

An intensive study of organic chemistry designed to bring a student who lacks an adequate preparation in this area, but who has a B.S. degree in some biological or physical science, to such a level of competency in organic chemistry that he may with confidence enroll in higher-numbered graduate courses in organic chemistry. (Credit for this course will not be counted toward the stated credit requirements for a graduate degree in chemistry.)

651—**Advanced Organic Chemistry.** Three hours. As needed.
Three lecture periods or equivalent per week.
Prerequisite: Successful completion of Organic Qualifying Examination or in special instances, permission of instructor.

A study of the structure of organic compounds and the relation to chemical bonding, stereochemistry, resonance concepts, and in general, the effects of structure on reactivity.

652—**Advanced Synthetic Organic Chemistry I.** Three hours. As needed.
Four hours lecture per week.
Prerequisite: CHE 651.

An in-depth study of the synthesis of organic compounds emphasizing modern reagents and methods.

653—**Advanced Synthetic Organic Chemistry II.** Three hours. As needed.
Four hours lecture per week.
Prerequisite: CHE 652.

An intensive study of reaction pathways that integrates stereochemistry, kinetics, and thermodynamics. Both ground-state and excited-state (photochemical) processes will be considered.

660—**Problems in Physical Chemistry.** Three hours. As needed.
Prerequisite: Permission of the instructor.

An intensive study of physical chemistry designed to bring a student who lacks an adequate preparation in this area, but who has a B.S. degree in some biological or physical science, to such a level of competency in physical chemistry that he may with confidence enroll in higher-numbered graduate courses in physical chemistry. (Credit for this course will not be counted toward the stated credit requirements for a graduate degree in chemistry.)

661—**Advanced Physical Chemistry.** Three hours. As needed.
Three lecture periods or equivalent per week.

A course that covers the molecular and thermodynamic basis for physicochemical phenomena. Practical applications of these principles to an under-

standing of other chemical disciplines will be stressed.

689—**Seminar.** One hour each quarter. Fall, Winter, Spring.

One hour per week.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

Prerequisite: Consultation with and permission of major professor.

700—**Chemical Literature.** Three hours.

Three lecture periods or equivalent per week.

Prerequisite: Permission of the instructor.

In this course, the student learns in detail how to search the literature for information related to his research. The major part of the course is concerned with information retrieval methods but discussions of general library procedures are included.

711—**Analytical Spectroscopy.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 411.

Quantitative determinations by atomic and molecular spectroscopy. Topics include atomic emission, atomic absorption, molecular absorption in IR, visible, and UV regions as well as fluorescence, phosphorescence, and x-ray techniques.

712—**Advanced Chemiscal Instrumentation.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: Permission of instructor.

Principles and characteristics of electrical instruments used in chemical research. Basic electronics, integrated instruments, chemical and physical problems encountered in automatic measurement and control.

713—**Analytical Separations.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 611.

Topics include gas, ion exchange, and thin-layer chromatography; precipitation and crystallization; zone refining; sublimation diffusion; and electromigration.

721—**Proteins.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 622 or permission of instructor.

Topics discussed include the purification of proteins, the determination of amino acid sequences, the determination of protein confirmation, and the relationship between structure and biological activity.

722—**Physical Biochemistry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 622.

Application of physical-chemical methods to the study of biological macromolecules.

723—**Enzymes.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 622.

Mechanisms of enzymatic action, enzyme kinetics, regulation of enzyme action and synthesis of enzymes.

731—**Coordination Chemistry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: Permission of instructor.

A study of molecular orbital and ligand field treatments of various complexes. Emphasis on electronic vibronic transitions.

733—**Chemistry of the Representative Elements.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 631.

A survey of the physical and chemical properties as well as synthesis and reactivities of compounds of the Group s, Group p, Lanthanide, and Actinide elements. Particular emphasis will be placed upon the current literature.

734—**Physical Methods in Inorganic Chemistry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 631.

A theoretical approach to the chemical bonding and structural analysis of inorganic complexes and compounds. Emphasis will be directed towards Raman and far infrared spectral analysis, electron spin resonance analysis, Mossbauer spectral analysis, and magnetic susceptibility analysis as each applies to the determination of structure and bonding.

741—**Nuclear Chemistry.** Three hours. As needed.

Two lecture periods or equivalent and one laboratory session per week.

Prerequisite: Permission of the instructor.

This course consists of a study of the interactions of radiation with matter, the nature of radioactivity, radioactive decay, radiation detection, nuclear reactions, nuclear models, tracers in chemical applications, nuclear spectroscopy, nuclear processes as chemical probes, and safety in handling radioactive materials. The laboratory is devoted to radiation detection using gieger, proportional, scintillation, surface barrier, and multichannel analyzer techniques and chemical problems utilizing these detection devices. A laboratory project involving the use of radioactive tracers in chemical synthesis is required.

751—**Physical Organic Chemistry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 651.

Selected topics including application of quantum mechanics to organic chemistry, use of kinetic and product studies to determine mechanisms, and use of cryoscopy, isotopes, etc., in the elucidation of structure and mechanism in organic chemistry.

752—**Mechanisms of Organic Reaction.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 651.

Principles and applications of organic chemistry relative to structure of molecules and the mechanism of organic reactions. Much emphasis is placed on

newer developments as reported in the chemical literature. Stereochemistry, kinetics, and thermodynamics are topics of special interest.

753—**Polymer Chemistry I.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 653 and permission of instructor.

A study of selected polymer systems, polymerization mechanisms, structure-property relationships and methods of evaluation.

754—**Polymer Chemistry II.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 753.

A study of selected polymer systems, polymerization mechanisms, structure-porperty relationships and methods of evaluation.

761—**Special Topics in Statistical Thermodynamics.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 661 or permission of the instructor.

Statistical mechanical theory and techniques are applied to calculations of thermodynamics properties. Topics may include theory of liquids, real gas behavior, application to polymer systems, etc.

762—**Structural Chemistry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 561.

This course will consist of a theoretical treatment of structural determinations and will encompass the following: symmetry, wave mechanics, rotation, nuclear magnetic resonance, molecular vibrations, anisotropic polarization, crystal structure analysis, electron diffraction.

763—**Introduction to Quantum Chemistry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 661 or permission of instructor.

Development of quantum theory relating to energy levels and bonding in chemical systems.

764—**Elements of Diffraction.** Four hours. As needed.

Three hours lecture and one laboratory session per week.

This course will consist of a treatment of scattering by x-rays, by neutrons, and by fast electrons from solids, liquids, and gases. Emphasis will be placed upon the current literature as well as classical techniques and analyses.

789—**Seminar.** One hour each quarter. Fall, Winter, Spring.

One hour per week.

791—**Research in Chemistry.** Credit arranged.

Prerequisite: Approval of major instructor.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

811—**Analytical Electrochemistry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: Permission of instructor.

The theory of thermodynamics of electrochemistry, theoretical derivations of electrochemical techniques and applications thereof will be presented.

821—**Biosynthetic Pathways.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: Permission of instructor.

A course designed to acquaint the student with metabolic pathways in detail. Subjects discussed are biosynthesis or terpenes, sterols and steroid hormones.

822—**Nucleic Acid and Protein Synthesis.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite : CHE 621 or permission of instructor.

An intensive study of protein and nucleic acid biosynthesis, with emphasis on biological control mechanisms.

831—**Organometallic Compounds.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisites: CHE 631 and CHE 651 or permission of instructor.

The chemistry of compounds containing carbon-metal and carbon-metalloid bonds. The preparation, structure, physical properties and chemical reactions of organometallic derivatives will be stressed along with topics of current interest in the chemical literature.

841—**Radiation Chemistry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisites: CHE 561 and permission of the instructor.

A study of the interaction of radiation with matter. Radiation sources, radiation dosimetry, ions and excited molecules, ion-molecule reactions, free radicals, radiation-induced polymerization, radiation interactions in gaseous, liquid, and solid systems, and the application of radiation to chemical processing.

851—**A Survey of Heterocyclic Chemistry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 651.

Nomenclature, synthesis, and reactions of the more common heterocyclic systems are presented with the purpose of teaching fundamental facts that can be applied to the study of more complex heterocyclic systems.

861—**Special Topics in Quantum Chemistry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: CHE 661.

This course develops some topic of current interest in quantum chemistry, such as magnetic resonance, electron spectroscopy, etc.

862—**Chemical Kinetics.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: Permission of instructor.

A study of the experimental techniques of measuring chemical reaction rates and the mathematical treatment of rate data. Topics include reaction order; molecularity; modern rate theories; ionic, free radical and complex reaction mechanisms; homogeneous, heterogeneous and enzyme catalysis; and the study of very fast reactions.

863—**Surface Chemsitry.** Three hours. As needed.

Three lecture periods or equivalent per week.

Prerequisite: Permission of instructor.

A study of the properties of surface such as calalysis, adsorption, ion exchange and electrical phenomena, etc.

898—**Dissertation.**

CHILD DEVELOPMENT (CD – 805)

550—**Administration of Preschool Program.** Three hours. Spring.

A course in the organizational structure and management of various preschool programs.

551—**Infant Development.** Three hours. Spring.

Three hours of laboratory and participation in the Infant Development Center per week.

A course for students and parents concerned with the infant. Particular emphasis will be placed on acquiring understanding of infant development. Readings, class discussions, and field trips into home and group situations will apply theory to practice.

552—**Child Development Methods and Materials.** Three hours. Winter.

Three lecture hours per week, plus three hours of observation and participation in the Child Development Laboratories.

A study of the role of play in the development of young children with emphasis on selection, care, and use of equipment. Opportunities are provided to evaluate and select materials for use, to develop teaching techniques, and to plan play activities for children.

553—**Creative Activities for the Preschool Child.** Three hours. Fall.

Three lecture hours and three hours of observation and participation per week.

A study of creative activities (literature, art, music, nature study, etc.) for preschool children and practical experiences with these in the Child Development Laboratories.

554—**Participation Experiences in the Infant Development Center.** Three hours. Quarterly.

Prerequisite: CD 550.

Directed participation and responsibility for the guidance of the infants and toddlers in the Infant Development Center. Administration and parent education experiences arranged. Opportunity for study of community agencies concerned with the development and care of infants and toddlers.

555—**Supervised Participation.** Four hours. Quarterly.

Prerequisite: CD 550.

Directed participation as an assistant in the Child Development Laboratories for one quarter. Hours arranged.

559—**Symposium in Child Development.** Two hours. Alternate summers.

650—**Advanced Child Development.** Three hours. Alternate summers.

A study of the development of the individual from birth through the

preschool years investigated in the light of personality development theories and current research.

654—**Seminar in Child Development.** One to four hours. As needed.

691—**Research in Child Development.** One to four hours. As needed.

692—**Special Problems in Child Development.** One to four hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours. Credit deferred until thesis is completed.

CLOTHING AND TEXTILES (C&T — 810)

530—**Textile Testing.** Three hours. Spring.

Prerequisite: C&T 330 or 334.

Testing apparel and household textile fabrics by standard ASTM and AATCC methods; interpreting and evaluating test results; application of data to better consumer understanding and practices.

531—**Tailoring.** Three hours. Winter, Summer.

Principles and techniques of tailoring applied to a suit or coat; attention given to suitability of pattern and fabric to individual, pattern and fabric to each other, cost, garment fitting, creative design details, and appropriate accessories; application of learnings to selection and evaluation of ready-made tailored garments.

532—**Textile Economics.** Three hours. Fall.

Prerequisite: C&T 330 or C&T 334 or the equivalent.

A study of problems which affect the consumer in the production, distribution, and consumption of textiles and clothing items.

537—**Apparel Design.** Three hours. Winter.

Prerequisite: C&T 332, 330 or 334.

Development of original designs for apparel items and survey of how the fashion world operates.

630—**Textiles: Recent Developments.** Three hours. Fall.

Prerequisite: C&T 330 or 334 or equivalent.

633—**Flat Pattern Design.** Three hours. Winter.

Creative dress design through the principles and application of flat pattern techniques; emphasis on solving figure problems; study of manufacturing process of commercial patterns; setting sizing standards.

635—**Demonstration Techniques and Preparation of Teaching Materials in Clothing and Textiles.** Three hours. As needed.

Prerequisite: Minimum of 12 credit hours of clothing and 4 credit hours of textiles.

636—**Speed Techniques and Coordinated Pattern Manipulation in Clothing Construction.** Three hours. Summer.

Prerequisite: 12 hours undergraduate work in clothing.

637—**Apparel Designing Through Draping.** Three hours. Spring.

Creative dress design through draping principles and procedures; study of leading designers, their techniques, and places in the market.

691—**Research in Textiles and Clothing.** One to four hours. As needed.

692—**Special Problems in Clothing and Textiles.** One to four hours.

698—**Thesis.** Six hours. Credit deferred until thesis is completed.

COMMUNICATION (COM — 208)

507—**Theories of Mass Communication.** Three hours. Winter, alternate years.

510—**Business and Industrial Communication.** Three hours. Fall.

600—**Process and Effects of Communication.** Three hours. Fall.

605—**Interpersonal Communication.** Three hours. Spring.

609—**Communication Seminar.** Three hours. Winter, Summer.

May be repeated twice with change of content.

610—**Problems in Business and Industrial Communication.** Three hours. Winter, alternate years.

691—**Research in Communication.** One to nine hours.

692—**Special Problems.** Three hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis in Public Address or Communication.** Six hours.

720—**Introduction to Graduate Research in Communication.** Three hours. Fall.

Required course for graduate degree in communication.

721—**Content Analysis of Communication.** Three hours. Winter.

747—**Comparative International Communication Systems.** Three hours. Summer, alternate years.

791—**Research in Communication.** One to nine hours.

792—**Special Problems.** Three hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library of other University facilities must enroll in this course.

809—**Seminar in Communication.** Three hours. Spring, Summer.

May be repeated twice with change of content.

862—**Seminar in Mass Media Control and Ethics.** Three hours. Fall, alternate years.

898—**Dissertation.**

COMPARATIVE LITERATURE (CLT – 230)

691–**Research.** Three hours.
May be taken for a total of nine hours of credit.
692–**Special Problems.** Two to six hours.
697–**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.
698–**Thesis.** Six hours.
701–**Introduction to Comparative Literature.** Three hours. Fall.
May be taken for a total of twelve hours of credit when topics vary.
750–**Comparatist History of World Literature.** Three hours. Winter.
May be taken for a total of twelve hours of credit when topics vary.
760–**Principles of Comparatist Interpretation.** Three hours. Spring.
May be taken for a total of twelve hours of credit when topics vary.
791–**Research in Comparative Literature.** One to twelve hours.
792–**Special Problems.** Two to six hours.
797–**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.
898–**Dissertation.**

COMPUTER SCIENCE AND STATISTICS (CSS – 330)

515–**Methods of Mathematical Statistics I.** Three hours. Winter, Spring.
Prerequisite: MAT 276 or permission of instructor.
Continuous and discrete distributions, moments of distributions, point and interval estimation, hypothesis testing, power of tests, analysis of variance (one-way classification, orthogonal contrasts), two-way classification analysis of variance, fixed, random and mixed methods.
516–**Methods of Mathematical Statistics II.** Three hours. Spring, Summer.
Prerequisite: CSS 515.
Orthogonal polynomial contrasts, multi-way classification, simple linear regression, multiple linear regression, polynomial regression, Designs (simple randomized blocks, nested factorials), intra-class correlation, quality control.
517–**Experimental Design.** Three hours. Summer.
Prerequisite: CSS 516.
Factorials, randomized blocks, Latin Squares and split-plot, fractional factorials, and confounding, response surface models.
518–**Sampling Methods.** Three hours. As needed.
Prerequisite: CSS 516.
The planning, execution and evaluation of sample surveys. Simple random

sampling, stratified random sampling, cluster sampling.

535—**Probability Theory.** Three hours. Fall.

Prerequisite: MAT 379.

Basic concepts in probability, properties of continuous and discrete distribution, characteristic functions, laws of convergence, transformations.

536—**Statistical Inference.** Three hours. Winter.

Prerequisite: CSS 535.

Properties of estimators, Bernoulli and Poisson processes, Cramer-Rao lower bound, power of tests.

537—**Least Squares Techniques.** Three hours. Spring.

Prerequisite: CSS 536.

Regression Analysis, Doolittle method, curvilinear regression, experimental design models.

540—**Educational Statistics.** Three hours. Winter, Summer.

Prerequisite: Permission of instructor.

Elementary probability, conditional probability, Binomial experiments, curve fitting, least square techniques, correlation and regression models.

570—**Boolean Algebra and Switching Circuits.** Three hours. Fall, Spring.

Prerequisite: Permission of instructor.

Symbolic logic and Boolean algebra for descriptions and analysis of switching circuits, basic sequential circuits, digital systems design principles.

571—**Computer Design.** Three hours. Winter, Summer.

Prerequisite: CSS 570.

A study of control units, arithmetic units, memories and microprogramming concepts.

576—**Introduction to Analog Computers.** Three hours. Winter, Summer.

Prerequisite: MAT 405 or CSS 323.

Design and testing of basic analog circuits.

577—**Advanced Analog and Hybrid Systems.** Three hours. As needed.

Prerequisite: CSS 476.

Use of the analog computer to solve engineering problems, process control.

COUNSELING AND GUIDANCE (CGE — 140)

522—**Curriculum Development for Occupational Orientation.** Three hours. Summer.

A course designed to introduce vocational teachers and counselors to principles of curriculum adaptation for school-based programs of occupational orientation. Emphasis is given to the acquisition, development, and organization of materials and resources for an experimental learning approach.

523—**Methods and Techniques of Group Guidance.** Three hours. Summer.

A course designed as an introduction to the fundamentals of developmental group guidance. Special attention is given to procedures and activities common to occupational orientation, homeroom and other types of group work in classroom and institutional settings.

532—**Community Resources for Guidance.** Three hours. Spring.

Prerequisite: Consent of instructor.

A course designed to study the nature and development of agency resources within the community, along with their purposes and functions, such as vocational rehabilitation, employment service, scouts, family counseling service, mental health centers, public welfare, and health agencies. Emphasis is on locating, understanding, and utilizing the services of the agencies in exchange of information and for referral of counselees.

610—**Foundations, Organization, and Administration of Secondary Guidance.** Three hours. Fall, Spring.

This course will include an introduction to the foundations of guidance and counseling. Special attention will be given to the services commonly provided by the counselor as well as familiarization with organizational structures and administrative processes of the secondary school.

611—**The Information Service in Guidance.** Three hours. Fall, Spring, Summer.

A survey of practices in guidance programs which give teachers, administrators, and counselors knowledge and skills in setting up and maintaining an occupational information file and in making the materials available to students.

612—**Methods and Techniques of Counseling.** Three hours. Fall, Winter, Summer.

A course designed to acquaint the guidance worker with the basic fundamentals of counseling and interviewing the individual. Attention is given to both old and new methods and techniques used in counseling.

613—**Use and Interpretation of Tests in Guidance.** Three hours. Fall, Winter, Summer.

A course designed to provide the counselor with means of securing, recording, and using data concerning individuals and groups. Emphasis is given to practical experience in using tests, inventories, and other devices for measurement.

614—**Analysis of the Individual.** Three hours.

Prerequisite: CGE 613.

A study of methods and techniques used by teachers and guidance workers in helping individuals evaluate themselves, with consideration of collecting, assembling, and using information. Emphasis is on subjective techniques.

640—**Student Personnel Work in Higher Education.** Three hours. Winter, Summer.

This course is designed to give students interested in entering personnel work at the college level a knowledge of the scope of personnel work, including those services basic to campus life, services for student growth, and services for special student groups. The professional nature of the personnel worker is emphasized.

650—**Foundations, Organization, and Administration of Elementary Guidance.** Three hours. Fall.

This course will begin with an introduction to the foundations of guidance and counseling. Special attention will be given to the services that are commonly provided by the counselor-consultant in the elementary school. Major emphases of this course will also include a program organization, delivery of services, and evaluation and follow-up.

692—**Special Problems I, II, III.** One hour each.

By prior arrangement only.

A problem study to be approved by the departmental chairman to develop knowledge and facility in a field of interest of the student. Preparation of a scholarly paper is required.

694—**Field Problems I, II, III.** One hour each. As needed.

By prior arrangement only.

This course provides students with the opportunity to do independent studies relating to problems of a practical nature which are encountered in field settings. Students are expected to develop a proposal for carrying out the study and a written report of findings at the conclusion.

696—**Supervised Practicum I, II.** Three hours each. Quarterly.

By prior arrangement only.

This course provides students with opportunities to do guidance, counseling and/or small group work under supervision in settings appropriate to their area of specialization.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours. Credit deferred until thesis is completed.

710—**Group Counseling.** Three hours. As needed.

711—**Theories, Techniques, and Practices of Guidance Consultation.** Three hours. Spring.

Theories of consultation that have been developed by various disciplines within the helping professions and business management will be discussed. Emphasis will be placed upon specific techniques derived from the various consultation theories; students will receive the opportunity to practice techniques derived from selected theories via role playing and use in actual professional situations, wherever possible.

712—**Guidance Testing.** Three hours. As needed.

713—**Readings.** Three hours. By arrangement.

Advanced seminar in which students do extensive reading in social and cultural foundations of counseling and personnel work. In addition to general reading, students select one area of special interest for a term project.

730—**Introduction to Community and Rehabilitation Counseling.** Three hours. Winter, Summer.

This course is designed to provide students with an orientation to community and rehabilitation counseling. Emphasis is given to historical and philosophical foundations, ethical and legal implications, counseling services, facilities and the interdisciplinary nature of community and rehabilitation helping services.

732—**Marriage and Family Counseling.** Three hours. Winter, Summer.

This course is designed to introduce students to:

(1) Pre-marital and marital adjustment problems;

(2) Strategies for family counseling and consultation, and

(3) Techniques for marriage counseling.

733—**Case Management Processes in Rehabilitation Counseling.** Three hours. As needed.

This course will focus on methods of casefinding; eligibility determination; the collection and evaluation of medical, psycho-social, and vocational information; the establishment of feasibility goals, provision of case services; job placement and case recording in the rehabilitation process.

734—**Socio-Psychological Aspects of Disability.** Three hours. As needed.

This course is designed to help rehabilitation counselors more adequately understand the impact of disability on the rehabilitation process. Emphasis is given to theory and research findings from the social and behavioral sciences as they relate to the understanding of human disability. The case study method is used as an integrating activity.

735—**Medical Aspects of Rehabilitation.** Three hours. As needed.

This course is designed to familiarize students with medical terminology, with the muscular, skeletal and neurological systems, and with common diagnostic categories encountered in rehabilitation counseling. Understanding utilization of symptomatology, treatment, and other management aspects of physical medicine is emphasized. The major outcome is directed toward developing the counselor's ability to interpret medical information in conjunction with developing a plan of action for disabled clients.

736—**Seminar in Problems of Rehabilitation.** Three hours. Winter.

This course will deal with a variety of disabling conditions encountered in community and rehabilitation settings. Students will study problems of special interest to counselors through reviews of the literature, use of consultants, on-site visits, and case studies.

740—**Seminar in Student Personnel Problems.** Three hours. Fall, Spring.

Discussion and analysis of a variety of problems facing workers in guidance, counseling and student personnel services. Special attention is given to the legal and ethical implications of personnel work.

760—**Guidance and Counseling Laboratory I.** Three hours.

Prerequisites: CGE 612 and 613 or equivalent and prior permission of instructor.

This course serves as an introduction to functional counseling practices. As a part of the basic guidance core, Laboratory I provides supervised practice in counseling activities that are primarily educational-vocational in nature. Particular attention is given to the development of competencies in counselor-client interaction, in the selection and proper use of tests and information as aids to the counseling process and in report writing. Attention is given to familiarization with intake procedures commonly used by counseling agencies. Students are expected to engage in a minimum of 30 contact hours with clients during the quarter.

762—**Guidance and Counseling Laboratory II.** Three hours. Quarterly.

Prerequisites: CGE 760 or equivalent and permission of instructor.

This course is designed to bring about a more sophisticated understanding of educational, vocational, and personal-social counseling. Working under direct supervision through visual and audio monitoring, students work with a variety of clients and are expected to develop a high level of professional competency in

counseling interaction, in individual assessment, and in test reporting. Counselors are expected to engage in a minimum of 45 contact hours with clients during the quarter.

763—**Group Counseling Laboratory.** Three hours. As needed.

Prerequisites: CGE 710 and consent of instructor.

A course designed to provide students with the opportunity to serve as facilitators of attitudinal counseling groups under supervision. Emphasis is on the application of contemporary theories to group work in functional settings.

791—**Research in Guidance.** One to nine hours.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a research problem or a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Research Problems.** Three hours.

810—**Doctoral Integrative Seminar.** One hour. Quarterly.

811—**Seminar in Systems of Counseling.** Three hours. Winter, Summer.

Prerequisite: Consent of instructor.

A course designed to explore both the theoretical and functional implication for interaction settings. Students will explore in depth specific theories of counseling and the application of such theories to practice. Extensive use of video-tapes and other audio-visual materials will be made.

840—**Testing in Higher Education.** Three hours. Fall.

Prerequisite: CGE 613 or equivalent course.

Students are introduced to major types of testing programs available to institutions of higher learning. Emphasis is given to functional uses to test data in key areas such as admissions, research and evaluation, long-range planning, and counseling.

841—**Administration and Organization of Student Personnel Services.** Three hours. Winter.

This course introduces students to the organization of student personnel services within the context of the college or university. Stress is given to administrative principles of relationships involved in initiating and maintaining an effective program of student services. Outside consultants and case studies are utilized.

850—**Advanced Guidance Research Seminar.** Three hours. Spring.

An advanced course for students interested in individual and group research methods, materials, and procedures in the various guidance service areas.

860—**Guidance and Counseling Laboratory III.** Four hours. Winter, Summer.

Prerequisites: CGE 762 or equivalent and permission of instructor.

This course serves as a more advanced phase of counseling laboratory training with a focus on counseling of a personal-social nature. Students are expected to develop competencies in utilizing a range of procedures designed to bring about positive growth with clients having personal-social difficulties. Working under close supervision, students receive feedback through both audio and video tapeing.

861—**Internship I, II.** Three to nine hours. Quarterly.
By prior arrangement only.
870—**Seminar in Counselor Education and Supervision.** Three hours. Spring.
898—**Dissertation.**

CRIMINAL JUSTICE STUDIES (CJ – 281)

503—**Criminal Law II.** Three hours. Winter, Spring.
A survey of procedural criminal law. Due process, search and seizure, self-incrimination, and rules of evidence are covered.
507—**Juvenile Justice System.** Three hours. Winter, Summer.
A study of police in delinquency prevention, investigation of juvenile crime, disposition of offenders, and juvenile courts.
508—**Problems in Criminal Justice.** Three hours. Fall, Spring.
A seminar-type course dealing with all aspects of the criminal justice system, tying together the knowledge of criminal justice previously learned.
692—**Special Problems.**

ECONOMICS (ECO – 610)

501—**Public Finance.** Three hours. Winter, Summer.
Prerequisite: ECO 255-256.
A study of federal and state spending and fund raising policies within the context of the social goals to be accomplished by such policies.
522—**Economics of Public Utilities.** Three hours. Fall.
Prerequisite: ECO 255-256.
A study of the development, institutional bases, theories, and regulation of public utilities.
524—**Economics of Urban Areas.** Three hours. Spring.
Prerequisite: ECO 255-256 or consent of instructor.
A study of current problems of the cities—race, poverty, pollution, unemployment, crime, and government finance.
535—**International Trade Theory.** Three hours. Fall.
Prerequisite: ECO 255-256.
A study of the historical development of international trade theory, the importance of international trade, the mechanism of international payments and modern theories dealing with the subject.
540—**Economic Development.** Three hours. Spring, alternate years.
Prerequisite: ECO 255-256.
A study of the nature, causes, and effects of regional and national economic development.
570—**Comparative Economic Systems.** Three hours. Fall, Spring.
Prerequisite: ECO 255-256.
A course designed to acquaint the student with the origins, development, and

characteristics of fascism, socialism, communism, and capitalism.

580—**Environmental Economics.** Three hours. Winter.

Prerequisites: ECO 255-256 or consent of instructor.

A survey of economic concepts relevant to decision making with reference to the management of natural resources heretofore considered to be "free" in nature.

600—**Microeconomic Theory.** Three hours. Fall.

Prerequisite: ECO 340.

An advanced study of the theory of price determination and resource allocation.

605—**Macroeconomic Theory.** Three hours. Winter.

Prerequisite: ECO 345.

An advanced study of the theories of income and employment, general equilibrium, and growth.

610—**Monetary Theory.** Three hours. Spring.

Prerequisite: ECO 330.

An advanced study of the determination of the level of prices and of alternative monetary and fiscal policies in the light of social goals.

620—**Statistics for Quantitative Analysis.** Three hours. Winter.

Prerequisites: ECO 301 and 302 or equivalent.

A study of classical statistical methods and Bayesian theory and their application for modern business problems.

625—**Managerial Economics.** Three hours. Fall, Winter, Summer.

An advanced study involving theory and actual cases in the application of economic analysis to the solution of business problems.

630—**History of Economic Thought I.** Three hours. Spring.

A study of the development of economic theories from Aristotle through the critics of the classical tradition.

631—**History of Economic Thought II.** Three hours. Fall.

A study of economic doctrines from the marginal revolution to Keynes. (Non-economic majors are advised to take Economics 631 rather than 630.)

650—**Problems in Political Economy.** Three hours. Alternate years.

Prerequisite: Consent of the instructor.

665—**Advanced Labor Economics.** Three hours. Alternate years.

Prerequisite: ECO 465 or consent of instructor.

An advanced study of wage and employment theory, unionism, and current labor force problems.

692—**Special Problems.** Three hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

EDUCATIONAL ADMINISTRATION (AED – 130)

600–**Basic Course in Educational Administration.** Three hours. Quarterly.

A basic course designed for teachers and prospective school administrators. This course emphasizes school organization, business management, personnel, public relations, school policies, board policies, leadership, school construction, school plant maintenance, transportation, special services, and evaluation.

602–**Organization and Administration of Adult Education.** Three hours. Winter.

The design and administration of educational programs for adults will be studied. Emphasis will be given to the following: establishing objectives, evaluating needs, implementing programs, selecting course and instructional resources, financing and administering programs.

604–**Administration of Media Programs.** Three hours. Winter, Summer.

Prerequisite: Basic courses in the field or by permission.

Considers problems in management of the media program including library, media and learning center, audiovisual services, educational television, and local production programs. Emphasis on organization, staffing and financing media services, and use of evaluation standards.

620–**Supervision of Instruction.** Three hours. Quarterly.

A practical course in supervision from the standpoint of the elementary, junior high, or high school principal and supervisor of instruction. Deals with principles and procedures of supervision.

622–**Supervision and Curriculum in Reading.** Three hours. Winter, Summer.

A study of organizational patterns in reading curricula and methods of improvement in reading instruction in schools from the point of view of the reading supervisor or consultant and the school administrator.

630–**The Elementary School Principal.** Three hours. Fall, Spring, Summer.

A study emphasizing the administrative problems faced by the principal. Considers practices in administration, supervision, school plant, supplies and equipment, attendance, curriculum, personnel, and parent-teacher cooperation. Stresses the professional leadership of the principal.

632–**Organization and Administration of the Junior High School.** Three hours. Winter.

The philosophy, functions, and curriculum and their implementation in the organization and administration of the junior high school program.

634–**Secondary School Administration.** Three hours. Fall, Spring, Summer.

The practical problems encountered by high school principals: scheduling, calendar, attendance, discipline, office management, records and reports, activities, selection and supervision of staff; the principal's professional growth, and his relationship to the school, teachers, and patrons.

650–**School Business Management.** Three hours. Winter, Summer.

A practical course in the overall aspects of present day school business administration. The relationships of the educational program to the various business functions of a school district will be covered as well as the adaptation of current school financial accounting on a state and national basis for a local school system.

692—**Special Problems I, II, III.** One to three hours.

A problem study to develop knowledge and facility in a field of interest for the student which requires preparation of a scholarly paper under the supervision of a graduate professor. This registration must be approved by the departmental chairman upon the recommendation of the student's major professor.

694—**Field Problems in Production I and II.** Three hours each. Quarterly.

Opportunity to study local school problems of curriculum revision, course of study construction, evaluation of methods, building projects, community surveys, testing programs, and record systems under careful supervision of a graduate professor.

The project must be approved by the departmental chairman upon the recommendation of the student's major professor.

697—**Independent Study and Research.** One to nine hours.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours. Credit deferred until thesis is completed.

700—**Public School Finance.** Three hours. Winter, Summer.

Principles of taxation; local, state, and federal financing of public education; equalization of educational opportunity, budget making.

704—**School Community Relations.** Three hours. Fall, Spring.

A study of public relations problems including reporting to parents and acquainting the community with the purposes, methods, accomplishments, and needs of the school.

706—**Administration of School Buildings and Grounds.** Three hours. Winter, Summer.

Designed for the local superintendent, treating the problem of housing, such as surveys, architect, finance, site, plans and specification, equipment, awarding contract, construction procedures, accepting, building and care of grounds.

708—**Administration of School Personnel.** Three hours. Fall, Spring.

A course stressing the administrative relationships involved in developing satisfactory personnel policies, techniques, and regulations dealing with the pupil, the staff, and the public. The general principles of personnel management as they affect the pupil and staff, instructional and noninstructional, will be covered.

710—**School Law.** Three hours. Winter, Summer.

Legal aspects of such factors as school income, injury to pupils, keeping the school census, enforcing attendance, teaching certain subjects, and related matter.

711—**Higher Education in the United States.** Three hours. Winter, Summer.

This course provides an overview of the development, scope, philosophy, objectives, and recent innovations in colleges and universities.

712—**The Junior College.** Three hours. Fall.

This course treats the development, functions, programs, philosophy, issues, and research related to the junior college.

713—**Curricula in Higher Education.** Three hours. Fall.

This course is concerned with curricula offered in the junior and senior college with particular attention to problems and issues in general education, technical education, professional education, and graduate education. Innovation and research in instruction will also be considered.

715—**Administration and Supervision of College Teachers.** Three hours. Summer.

This course stresses the processes and techniques of administration and supervision of college teaching. Topics covered include the roles of faculty and administration, the instructional budget, faculty selection, orientation, tenure, responsibilities of teachers.

717—**Continuing Education and Community Service.** Three hours. Summer.

The course will deal with the role and scope of continuing education and community service in higher education, including the community college.

719—**The Organization and Administration of Occupational Education in the Community College.** Three hours. Spring.

A study of the historical, social, economic, educational, and legal bases for occupational education as a function of the school: elementary and comprehensive secondary schools, skill centers, area vocational complexes, technical institutes and community colleges; problems of organization and structure, administration and supervision, staffing, articulation, coordination of efforts of the various agencies involved, program planning, evaluation, and finance; emphasis will be placed on occupational education in the secondary school and the community college.

720—**Advanced Curriculum Development.** Three hours. Fall, Spring.

This course is designed for the school administrator who has or will have responsibility for curriculum development in a school system. Areas covered are: modern elementary, junior high school, and senior high school curricula; the scope and sequence of curriculum patterns for a school system; correlation of elementary, junior high, and senior high curriculums and courses of study; in-service education of the instructional staff; and the utilization of the community in curriculum development.

736—**Practicum in Educational Administration.** Three hours. Fall, Spring.

A study emphasizing problems connected with modern educational administration. Contemporary theories are related to the problems of administering the public school from the standpoint of the superintendent and the central office staff.

738—**Practicum in Supervision.** Three hours. Winter, Summer.

This advanced course in supervision deals mainly with supervisory services provided from the central administrative office of the school district. A seminar approach is utilized in coordinating such services and individual problem solutions.

750—**Administrative Workshop I, II, III, IV, and V.** One and one-half hours per week. (Course may be repeated, with only nine hours counting toward a degree.) Summer.

755—**Problems of the County Superintendent.** Three hours. Winter.

A course designed for county superintendents in which they study their

problems under the direction of a graduate professor.

791—**Research in Educational Administration, Supervision, and Curriculum.** One to nine hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Three hours.

794—**Field Problems in Administration I, II, III.** One hour each. As needed.

A project dealing with a specific problem in school administration. An on-the-job training program with the work being done under the supervision of a graduate professor. This registration must be approved by the departmental chairman upon the recommendation of the student's major professor.

797—**Independent Study and Research.** One to nine hours.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Research Problems.** Three hours.

Selection of practical educational problems for solution by candidates for the specialist's degree, using research and professional knowledge. A scholarly report is required.

800—**Advanced School Administration and Supervision.** Three hours. Fall, Spring.

This course deals with the theory and concepts underlying present day school administration and supervision.

814—**Organization and Administration of Higher Education.** Three hours. Winter.

This course is designed to: examine typical organizational patterns of colleges and universitits; develop an understanding of the basic functions of governing and coordinating boards and of officials involved in college and university administration; and develop an understanding of principal problems faced in the administration of institutions of higher learning.

816—**Seminar in Problems of Higher Education.** Three hours. Spring.

Discussion of problems and topics in higher education to be determined by the students and the instructor. Qualified resource people will be utilized as needed.

889—**Special Topics Seminar.** One hour.

A seminar for in-residence doctoral students in educational administration. Emphasizes special topics, problems, and issues of current interest to administrators in K-12 and higher education. Essentially students are directed in consultation with departmental adviser; faculty and other resource persons are utilized. (Seminar may be repeated with a maximum of three hours counting toward a degree.)

898—**Dissertation.**

EDUCATIONAL FOUNDATIONS (CIF – 125)

590–**Classroom Use of Instructional Television.** Three hours. Winter, Summer.

Workshop in the utilization of Mississippi's state program of instructional television for elementary teachers, media directors, curriculum supervisors, and administrators. Provides a comprehensive experience in the planning, organization, presentation, and use of instructional television.

604–**Foundations in American Education.** Three hours. Quarterly.

A survey of the philosophies, psychologies, and history of American education intended to give the student a fundamental understanding of more specialized courses in these fields. Required of all graduate students.

607–**Basic Course in Curriculum Development.** Three hours. Quarterly.

A study of social and psychological factors influencing curricular planning, principles and procedures for validating educational objectives, selecting and structuring experiences, initiating and directing curricular change, and evaluating results of curricular planning.

619–**Utilization, Selection, and Preparation of Audiovisual Materials.** Three hours. Winter, Spring, Summer.

General principles, problems, and practices involved in selecting, utilizing, and preparing of audiovisual materials for instructional purposes. Emphasis on the advantages, limitations, and practical uses of each major type of materials.

632–**Measuring Results in Education.** Three hours. Fall, Spring, Summer.

A course designed to equip the teacher for effective selection and construction of tests for measuring specific achievement of teaching objectives and for statistical interpretation of data. Stresses use of teacher-made tests.

660–**Economic Education for Teachers.** Three hours. Summer.

A course designed to assist teachers in obtaining a deeper knowledge and understanding of our economic system. Emphasis will be placed on the attainment of economic concepts and the correlation of these concepts into the social studies curriculum.

680–**Direction and Supervision of Student Teaching.** Three hours. Summer.

A study of general techniques of a supervising teacher, including observation, guiding student teachers in planning, orientation of student teachers, student teacher participation and evaluation.

701–**Analysis of Teaching Behavior.** Three hours. Summer as needed.

Prerequisite: RED 601 or permission of instructor.

An examination of the studies or projects devoted to analyzing teacher behavior as a means of determining teacher competency. This course will include training in interaction analysis and other observational procedures, and an analysis of the teaching skills taught in microteaching and training in the procedures of microteaching.

709–**Social Foundations of Education.** Three hours. Summer.

A study of contrasting motivations and values of various cultural groups and their implications for education. Particular emphasis is given to the economically and culturally disadvantaged.

735—**Advanced Production Techniques.** Three hours. Fall.

Deals with the communication skills involving the production of basic types of audiovisual materials. Theory and practices are covered relative to planning, shooting, and editing picture stories.

740—**Programmed Instruction.** Three hours. Fall, Summer.

Prerequisite: CIF 619.

Theories and techniques of programmed learning applied to the design, production, and evaluation of instructional materials. Students will prepare and field test programmed materials and survey research studies.

741—**Instructional Graphics.** Three hours. Winter.

Develops systems of production for a wide variety of visual materials. Laboratory practice is provided in each skill needed for programs of local production in media centers of public schools. Relates principles of perception to the dynamics of visual media such as transparencies, slides, photos, maps, charts, posters, and bulletin boards. Lettering, mounting, and laminating techniques are practiced.

742—**Research in Instructional Systems Technology.** Three hours. Quarterly.

Prerequisites: RED 601, CIF 632, or RED 602.

Problems in the formulation of educational objectives, audiences and their characteristics, integrated use of communications media, and evaluation of educational outcomes. Research methods applied to audiovisual communications.

743—**Educational Television Production.** Three hours. Spring.

Prerequisites: CIF 416 or 619.

A course designed for media specialists to provide them with the knowledge and skills to supervise and to produce instructional television programs for use in schools and colleges, government, churches, the military, and industry.

816—**History of Public Education in the United States.** Three hours. Fall, Spring.

A critical survey of the development of public education with emphasis on the social, political, religious, and economic forces that have influenced this development.

818—**Comparative Philosophies of Education.** Three hours. Winter, Summer.

A critical examination of philosophies and theoretical concepts of leading modern philosophies and their significance for education.

EDUCATIONAL PSYCHOLOGY (EPY – 180)

576—**Learning in Adult Education.** Three hours. Quarterly.

A study of learning in adulthood, and related to a range of educational programs.

582—**Contemporary Problems in Educational Psychology.** Three hours. As needed.

May be taken up to nine hours with change of content.

Prerequisites: PSY 110 and permission of the instructor.

A review of theory and research on selected contemporary topics in educational psychology. Students should contact the Department of Psychology during the quarter prior to registration regarding the content for the forthcoming quarter.

691—**Research in Educational Psychology.** One to nine hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours. Credit deferred until thesis is completed.

710—**Seminar in Teaching of Psychology.** One hour. As needed.

An analysis of the psycho-educational problems involved in the undergraduate and graduate teaching of psychology.

712—**Practicum in Teaching Psychology.** Three hours. As needed.

Supervised teaching of courses in psychology.

720—**Learning and Motivation I.** Three hours. Winter.

Consideration of the basic concepts, problems, and research methodology in the studying of learning and motivation.

721—**Learning and Motivation II.** Three hours. Spring.

An intensive study of the role of contemporary theories of learning and motivation in current research.

722—**Brain Damage and Behavior.** Three hours. As needed.

Prerequisite: Permission of the instructor.

The numerous causes of brain injury are studies and their effect on the mental and physical behavior of man are considered.

731—**Community Mental Health.** Three hours. Summer.

Prerequisite: Permission of the instructor.

Concepts and techniques of mental health consultation with emphasis on the psychologist's role in the field of mental health.

732—**Psychology of Mental Retardation.** Three hours. Fall.

Prerequisite: Permission of the instructor.

Study of personality development, problems of adjustment, and abnormal behavior of the mentally retarded. Consideration of psychological and medical treatment of the emotionally disturbed, mentally retarded individual.

740—**Advanced Educational Psychology.** Three hours. Fall, Spring, Summer.

Designed primarily for the graduate student wishing to broaden his knowledge in the field of psychology of learning. Careful study of research and experimentation dealing with individual and group learning.

742—**Learning and Instruction in Higher Education.** Three hours. Winter, Summer.

A study of the application of learning principles and instructional techniques in higher education.

745—**Psychology of the Gifted Child.** Three hours. As needed.

Prerequisite: Permission of the instructor.

Study of the characteristics and needs of gifted children and the various means employed by the schools to provide for these children.

746—**Social Processes in Classroom Learning.** Three hours. Winter, Summer.

Pupil-teacher interaction; leadership in directing classroom activities, especially in instructing, developing goals, changing attitudes, resolving conflicts, and enhancing the individual's sense of worth.

750—**Leadership.** Three hours. As needed.

Prerequisite: Permission of the instructor.

Study of the factors affecting leadership in a school or industrial setting; emphasis is placed on status and esteem as factors.

751—**Advanced Social Psychology.** Three hours. As needed.

A study of theory, research, and practice related to group processes and their interaction with individual behavior.

755—**Group Dynamics.** Three hours. Summer.

Prerequisite: EPY 750 or permission of the instructor.

A study of theory and practice in group development and group dynamics.

760—**Intelligence: Theories and Development.** Three hours. Winter.

Nature of intelligence, and its development; critical evaluation of methods of measurement; relation of intelligence to social efficiency.

762—**Interpretation of Psychological Tests for Exceptional Children.** Three hours. As needed.

Prerequisite: Permission of the instructor.

A study of the various psychological tests used in the appraisal and evaluation of exceptional children.

772—**Case Studies in School Psychology Problems.** One hour. As needed.

A course designed to present the student with studies of clinical, school, and other psychological problems encountered by the school psychologist. Critical evaluation of the process and practice of writing and presenting case material.

774—**Advanced Child Psychology.** Three hours. Winter, Summer.

A course dealing with the mental, motor, social, and emotional development of children of elementary school age. Stresses the application of developmental psychology to education and guidance. Considers child growth as progressive development.

775—**Advanced Adolescent Psychology.** Three hours. Fall, Spring.

An advances study of the adolescent and his needs in the home, school, and community. Includes a survey of the research studies and literature on the period of adolescence. Individual or group reports are required.

783—**Seminar in Psychological Services in Schools I, II, III.** One hour each. Fall, Winter, Spring.

Advanced general psychology with special emphasis on relationships of each topic to the areas of school psychology, educational of the handicapped, etc.

791—**Research in Educational Psychology.** One to nine hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Three hours.

796—**Practicum in School Psychology.** Three hours. As needed.

Provides an opportunity to perform the duties of the school psychologist under supervision. Group and individual testing, contact with school personnel, individual counseling, and community relations will be stressed.

797–**Independent Study and Research.** Hours arranged.

Not to be counted as credit towards a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

898–**Dissertation.**

EDUCATIONAL RESEARCH (RED – 135)

601–**Research: Its Introduction and Methodology.** Three hours. Quarterly.

Methods of scientific inquiry, selection of a research topic, principles of reporting research, and functional statistical concepts.

602–**Introduction to Educational Statistics.** Three hours. Quarterly.

Basic concepts and computations in descriptive statistics. Introduction to sampling procedures and inferential processes in educational research.

712–**Computer Applications in Educational Research.** Three hours. Fall, Summer.

Prerequisites: RED 752, 753 (Recommended).

Skills development course in the computer analysis of behavioral science data and orientation toward the systems approach, communication procedures, and computer utilization in financial, pupil, and personnel accounting procedures. Practical applications will be emphasized.

718–**Practicum in Educational Research.** Three hours. Fall.

Prerequisites: RED 752, 753. (Recommended).

Overview of types of current research related to education, primarily in student's major field. Experience in application of appropriate research models, writing behavioral objectives, structure of research reports, critique of published research problems, presentation and analysis of student's proposed research problem.

720–**Measurement in Educational Research.** Three hours. Winter.

Prerequisites: RED 752, 753.

A survey of the theory of measurement including true score theory, reliability, validity, theoretical and applied item analysis and item selection techniques. Examination of measuring instruments applicable to research in the educational setting.

752–**Educational Research: Correlational Statistical Methods.** Three hours. Quarterly.

Prerequisite: RED 602 or permission of instructor.

A brief review of elementary statistics and normal curve functions. Correlation theory and application to educational data. Concepts and computations associated with bivariate, partial, and multiple correlation.

753–**Educational Research: Significance Tests and Statistical Methods for Experimental Design.** Three hours. Quarterly.

Prerequisite: RED 752.

Probability theory and theoretical distributions in experimental design: binomial, normal curve, t ratio, chi square, and F ratio. Concepts and computations associated with the use of these distributions in making

probability decisions in research, including t tests, simple analysis of variance, and complex analysis of variance through 3-way design.

791—**Field Problems in Educational Research.** One to twelve hours.

Prerequisite: Approval of major professor and Educational Research Staff.

792—**Special Problems in Educational Research I, II, III.** One hour each. By arrangement.

Prerequisite: Approval of major professor and Educational Research Staff.

A problem study involving specific research procedures applicable to development of skills in different types of research within a field of interest. The preparation of a scholarly paper is required.

793—**Advanced Educational Research.** Three hours. Quarterly.

A seminar in problems related to the philosophy of scientific method as applied to educational research, types of educational research, methods of observation and data collection, methods of quantifying a research data base, and methods of design, measurement, analysis, interpretation, and reporting of educational research.

798—**Research Problem.** Three hours. Quarterly by arrangement.

Selection and development of a practical educational research problem for the specialist's degree. A scholarly research paper is required.

824—**Research Design in Educational Research.** Three hours. Spring.

Prerequisites: RED 752, 753.

Study of experimental and quasi-experimental designs in educational research and appropriate statistical treatment and interpretation. Emphasis upon sources of invalidity and utilization of design principle and statistical controls in educational research applications.

830—**Multivariate Analysis in Educational Research.** Three hours. Summer, and by arrangement.

Prerequisites: RED 752, 753.

Theory and application of multiple regression analysis, multiple and connical correlation, multiple discriminant analysis, factor analysis and advanced Anova techniques to data in educational research. Emphasis upon principles of application and interpretation.

ELEMENTARY EDUCATION (CIE — 115)

503—**Kindergarten-Primary Education.** Three hours. Quarterly.

A study of the contributions which group living makes to the mental and physical health of young children, with emphasis upon child development research in curricular experience and records. Designed to help teacher and parents understnad the readiness program. Laboratory is included.

512—**Diagnosis and Remediation of Reading Disability for the Classroom Teacher.** Three hours Quarterly.

This course deals with the need for corrective and remedial reading in the school; nature and causes of reading disability; procedure in making a classroom diagnosis, including interpretation of results; remedial treatment of reading difficulties to include techniques and materials; and some opportunity for

testing and remedial teaching in the public schools.

590—**Workshop in Aviation Education.** Three hours. Summer.

A course designed to familiarize teachers, principals, and superintendents with developments and trends in aviation and aerospace exploration and with the implications of those developments on our social, economic, and political life. May be taken twice for a total of credit six (6) hours.

591—**The Reading Conference.** One hour. Summer.

An intensive program for three days during the Summer Quarter consisting of lectures, group discussions, and demonstration lessons.

691-I—**Research in Reading.** Three hours. As needed.

This course provides the student with an intensive review of selected research in a concentrated area of reading. The student will develop a proposal for a research project under the direction and supervision of a graduate professor.

691-II—**Research in Reading.** Three hours. As needed.

In this course the student carries out the research project which he formulated in CIE 691-I. The project will be written under the guidance of a graduate professor and presented in a form suitable for publication.

692—**Special Problems I, II, III.** One hour each.

A problem study to be approved by the appropriate department head to develop knowledge and facility in a field of interest for the student which requires preparation of a scholarly paper under the supervision of a graduate professor.

694—**Field Problems in Production I, II.** Three hours. As needed.

Opportunity to study local school problems of curriculum revision, course of study construction, evaluation of methods, building projects, community surveys, testing programs, and record systems under careful supervision of a graduate professor.

The project must be approved by the departmental chairman upon the recommendation of the student's major professor.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

704—**Reading for Different Cultural Groups.** Three hours. As needed.

This course will review the current research relating to the culturally different. Implications of these research findings will be drawn from the field of reading, relating specifically to the creation of appropriate materials and adapting methodology to these groups.

705—**Modern Concepts in Reading Skill Development.** Three hours. Summer.

This course makes an intensive study of the skills required in reading, up-to-date methods and materials required to teach these skills, and classroom techniques for evaluation for evaluating proficiency in the development of these skills. This course provides an understanding in depth of reading for the experienced teacher and in-service training groups.

706—**Psychology of Reading.** Three hours. Fall, Summer.

This course deals with (1) the nature of reading, (2) reading as a perceptual process, (3) learning principles and the reading process, (4) motivation and reading interest, (5) personality factors in the reading process, and (6) readibility.

713—**Advanced Diagnosis and Remediation of Reading Disability for the Classroom Teacher.** Three hours. Winter, Summer.

Prerequisite: CIE 706.

A course dealing with the need for corrective and remedial reading in the school; the nature and causes of reading disability; procedure in making a classroom diagnosis; disability analysis interpretation; classroom remedial treatment of reading difficulty to include techniques and materials.

715—**Diagnosis and Remediation of Reading Disability for the Reading Clinician or Reading Specialist.** Three hours. As needed.

Prerequisite: CIE 706.

This course deals through lecture, discussion, demonstration, and observation with (1) the role of the reading clinician or specialist in current society; (2) reading clinic organization; (3) the nature and causes of reading disability; (4) procedure and tools used in making a diagnosis in the clinical setting; (5) disability and analysis interpretation; (6) remedial instruction in the clinic of reading disability including techniques and materials; (7) a limited requirement to be met in testing and teaching and observation in clinic.

717—**Professional Relationship in Improved Elementary Programs.** Three hours. Fall.

A course designed to investigate behavioral factors of individuals and groups as they affect and improve elementary school environment. Concepts and techniques of elementary teacher behavior will be investigated in detail and in theory and practice.

720—**Internship in Reading: Public School, Clinic, or Research.** Six hours. As needed.

This is an instructional internship to prepare the individual to be able to assume a position in a public school as director or supervisor of reading instruction, or a position in a reading clinic. Since this is the capstone of the specialist's program, an effort will be made to locate the student in the system where he will accept a position upon graduation. For those students going into research, an exchange program will also be set up with reading clinics and research groups in other states. In all three instances the student will work full time at his selected position, taking no other course work. There will be continuous evaluation of the student's progress during the internship between the University and the accepting agency.

721—**Practicum in Remedial Reading.** Three hours. As needed.

Prerequisite: CIE 715.

The course provides an opportunity to learn methods and materials useful in remedial instruction through laboratory experience with children with remedial reading difficulties. Course meets twice a week for discussion with four laboratory periods arranged.

724—**Problems of Teaching Arithmetic.** Three hours. Spring.

Prerequisite: MAT 310 or consent of instructor.

A study of techniques, particularly those related to number concept, or teaching arithmetic; an examination of research studies and of current practices used in teaching at the elementary school level.

725—**Social Studies Education in Elementary School.** Three hours. Winter, Summer.

Programs, practices, trends, and investigation of special problems; criteria for evaluating, planning, organizing, and improving social studies programs.

726—**The Development of the Latin American Countries.** Three hours. Summer.

Consideration is given to the historical development of the region, the land, origin of the people, race mixture, population movements, and natural resources. Further consideration is given to the political, social, and economic development of the region.

728—**Curriculum Problems in the Elementary School.** Three hours. Spring, Summer.

A course involving analysis of elements of the curriculum. Emphasis is placed upon the implication of social life and the nature of the individual for curriculum development. Evaluates various curriculum procedures in terms of the implications.

729—**Reading in the Elementary School.** Three hours. Fall, Spring, Summer.

A course providing for extensive study of recent trends in materials and methods in reading in the elementary school including significant related research studies.

730—**Reading and Study Improvement Techniques for the Junior and Senior College Teacher of Reading.** Three hours. As needed.

A study of research, discussion of theory, and a practicum with current materials and methods will be utilized. Characteristics of students, evaluation techniques, organization, and administration of the total program will be included.

733—**Practicum in Diagnosis and Remediation of Reading Disability for the Classroom Teacher.** Three hours. Quarterly.

Prerequisite: CIE 715.

A course in which the student works with small groups of corrective reading cases, diagnosing needs, and teaching corrective lessons.

736—**Practicum in Reading Diagnosis.** Three hours. Quarterly.

Prerequisite: CIE 713.

This course is to develop in the student the ability to make a complete reading diagnosis, interpret the results, make specific recommendations with regard to the diagnosis, and to be able to conduct a pre- and post- diagnosis parent interview.

737—**Practicum in Remedial Reading Instruction I.** Three hours. As needed.

This graduate course is to provide the student experience in interpretation of test results of reading disability cases, the selection of remedial materials, and teaching techniques which would be appropriate for different disabilities. The student will teach a remedial case and have experience in writing case progress

reports.

737—**Practicum in Remedial Reading Instruction II.** Three hours. As needed.

This graduate course is an extension of the first practicum. The doctoral level student will need this additional experience.

762—**Research in Elementary Education.** Three hours. Fall.

Prerequisite: Advanced graduate status or permission of chairman of department.

A course designed to familiarize the student with the elements and methods of research, with the representative types of research, and with major contributions of research to the field of elementary education.

770—**Practicum in Early Childhood Education.** Three hours. Fall, Winter, Summer.

A course of study concerned with the specific practices and research investigations relative to curriculum planning, administration, and supervision within early childhood laboratories. Observations and participation within the existing programs, including pupil contact and limited research activities, is required.

772—**Practicum with Parents.** Three hours. Winter.

An action research course dealing with specific techniques of counseling, intrapersonal relationship within family organization, parent-teacher interview techniques, parent-teacher organizations, and in-service counseling with parents of kindergarten and primary age pupils.

776—**Seminar in Early Childhood Education.** Three hours. Winter, Summer.

A study of general practice, theory, and research in the related fields of early childhood education. The student will be involved with individuals and/or small groups of children in a practicum setting. The relatedness of the psychological, sociological, physiological and intellectual patterns and their impact upon child development will receive major attention. A scholarly report considering the factors mentioned above will be required.

777—**Evaluation in Early Childhood Education.** Three hours. Fall, Spring.

An introduction to specific principles and practices relative to group evaluative procedures with emphasis placed upon the developmental, diagnostic, and projective techniques, case study and standardized testing procedures within the early childhood education range.

778—**Creative and Mental Growth.** Three hours. Spring, Summer.

Research in the development of habits of creative thinking and its relationship to mental growth, involving art, music, drama, creative writing, and other behavior patterns. Research exercises required.

780—**Research in Child Development.** Three hours. Winter, Summer.

Research in child behavior, child psychology, maturity factors, laboratory experimental studies, physiological development, experimental methods of perception in children, interpersonal relationship, behavior among children, or family life variables.

782—**History and Philosophy of Early Childhood Education.** Three hours. Fall.

A course of study concerned with in-depth investigations of Pestalozzi, Froebel, Montessori, and others representing schools of thought influencing the

curriculum and program of young children. Investigations into the social and cultural changes which have influenced and modified early childhood programs will be treated in detail.

785—**Seminar in Reading Instruction.** Three hours. As needed.

Provides an intensive study in depth of facets of reading instruction.

791—**Research in Elementary Education.** One to nine hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Three hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a research problem or a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Research Problem.** Three hours.

Selection of practical educational problems for solution by candidates pursuing the specialist's degree, using research and professional knowledge. A scholarly paper is required.

862—**Seminar in Elementary Education.** Three hours. Winter, Summer.

Prerequisite: Advanced graduate status or permission of chairman of department.

An intensive examination of the issues related to the elementary school program. This course will be interdisciplinary in nature and will focus upon contributions of research, philosophy, history, sociology, and educational psychology as it applies to the resolution of major issues in elementary education.

898—**Dissertation.**

ENGLISH (ENG – 224)

500—**Introduction to Linguistics.** Three hours. Fall.

501—**Advanced Grammar.** Three hours. Quarterly.

502—**English Syntax.** Three hours. Winter.

506—**History of the English Language.** Three hours. Winter, Summer.

509—**Studies in Linguistics.** Three hours. May be repeated as topic varies to a total of six hours. Spring.

510—**Readings in World Literature I.** Three hours. Fall.

511—**Readings in World Literature II.** Three hours. Winter.

513—**The Modern European Novel.** Three hours. Winter.

515—**Modern European Poetry.** Three hours. Winter.

517—**Modern Drama.** Three hours. Spring.

519—**Studies in Comparative Literature.** Three hours. May be repeated as topic varies to a total of six hours. Summer.

521—**Short Story Writing.** Three hours. Winter, Summer.

522—**Poetry Writing.** Three hours. Fall, Spring.

524—**Traditions and Forms.** Three hours. Fall.

549—**Studies in Literary Criticism.** Three hours. May be repeated as topics vary for a total of nine hours. Quarterly.

551—**Chaucer.** Three hours. Spring.

552—**Medieval English Literature.** Three hours. Fall.

554—**Shakespeare's Comedies and Tragicomedies.** Three hours. Fall, Winter, Summer.

555—**Shakespeare's Histories and Tragedies.** Three hours. Fall, Spring.

556—**Sixteenth Century British Literature.** Three hours. Fall.

558—**Seventeenth Century Prose and Poetry.** Three hours. Winter.

559—**Milton.** Three hours. Winter, 1974-1975.

561—**Major Writers of the Eighteenth Century.** Three hours. Spring.

563—**The British Novel.** Three hours. Fall, Summer.

565—**Nineteenth Century British Literature: Romantic.** Three hours. Fall.

566—**Nineteenth Century British Literature: Victorian.** Three hours. Spring.

567—**Twentieth Century British Literature.** Three hours. Winter.

570—**The American Literary Renaissance, 1820-1870.** Three hours. Spring.

571—**The Rise of Realism in American Literature, 1870-1920.** Three hours. Winter.

572—**American Drama.** Three hours. Spring.

577—**The American Novel, 1920-1960.** Three hours. Fall, Summer.

578—**Modern American Poetry.** Three hours. Winter.

585—**Literature of the South.** Three hours. Fall, Summer.

692—**Special Problems.** Three hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

701—**Seminar in Analysis of Linguistic Structure.** Three hours. May be repeated as topic varies to a total of six hours. Spring.

702—**Readings in Linguistics.** Three hours. May be repeated as topic varies to a total of six hours. Summer.

710—**Seminar in Modern Fiction and Drama.** Three hours. May be repeated as topic varies to a total of six hours. Summer.

714—**Tutorial in English and Germanic Philosophy I.** Three hours.

715—**Tutorial in English and Germanic Philosophy II.** Three hours.

721—**Advanced Creative Writing.** Three hours. Fall, Summer.

740—**Bibliography and Methods of Research in English.** Three hours. Fall, Summer.

744—**Seminar in Literary Principles and Processes.** Three hours. Spring.

750—**Anglo-Saxon.** Three hours. Winter.

751—**Beowulf.** Three hours. Spring.

753—**Middle English.** Three hours. Fall, 1974-1975.

754—**Seminar in Medieval Literature.** Three hours. May be repeated as topic varies to a total of six hours. Fall, Winter.

756—**Seminar in Non-Dramatic Renaissance Literature** Three hours. Summer.

757—**Seminar in Renaissance Drama.** Three hours. Summer.

760—**Seminar in Seventeenth Century British Literature.** Three hours. May be repeated as topic varies to a total of six hours. Spring, 1975.

761—**Seminar in Johnson and His Contemporaries.** Three hours. Spring.

762—**Seminar in Pope and His Contemporaries.** Three hours. Spring, 1975.

763—**Seminar in English Romanticism.** Three hours. Fall.

764—**Seminar in Victorianism.** Three hours. Winter, 1974-1975.

766—**Seminar in Modern Poetry.** Three hours. May be repeated as topic varies to a total of six hours. Winter.

770—**Seminar in American Literature I.** Three hours. May be repeated as topics vary to a total of six hours. Fall.

771—**Seminar in American Literature II.** Three hours. May be repeated as topic varies to a total of six hours. Fall.

772—**Readings in American Literature.** Three hours. Winter.

791—**Research in English.** One to nine hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Three hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

898—**Dissertation.**

ENVIRONMENTAL SCIENCE (ESC — 335)

501—**Pollution Detection.** Four hours. Fall.

A study of the composition of natural waters and clean air, water and air quality standards, and the physical, chemical, and biological sampling and testing for water pollutants or air pollutants. Emphasis is on field sampling and field tests.

502—**Pollution Analysis.** Four hours. Winter.

A continuation of ESC 501 with emphasis on analyzing and evaluating pollution abatement systems.

511—**Electronics for Scientists.** Four hours. Quarterly.

A modern practical course in electronics necessary for an understanding of the functions and malfunctions of modern electronic instrumentation. The principles of automating laboratory and field measurements are stressed along with digital computer logic circuits.

789-I, II, III—**Seminar in Environmental Science I, II, III.** One hour each.

Modern topics in pollution of the environment will be discussed.

FINANCE (FIN – 615)

625–**Managerial Finance**. Three hours. Quarterly.

Prerequisites: One course in finance and one in accounting.

Basic decision-making issues in managing short-term and long-term funds. Quantitative tools are applied at all levels.

630–**Problems in Finance.** Three hours. Spring.

Prerequisite: FIN 625 or equivalent.

Application of tested and experimental financial theory by financial managers to decision making problems relating to working capital and fixed capital management. Some emphasis placed upon quantitative tools and techniques for analysis and decision making.

640–**Managing Financial Institutions.** Three hours. Fall.

Gives the student an understanding of all of the major financial institutions, their organizational structures, functions, interrelationships, and methods of operation.

650–**Real Estate.** Three hours. Summer.

An overview of real estate as it relates to the business world including location analysis, real estate investment, and tax factors.

652–**Problems in Investment.** Three hours. Winter.

Prerequisite: FIN 625 or equivalent.

Application of tested and experimental theories by investment managers to problems of short and long-term decision making. Some emphasis upon quantitative tools and techniques applied to optimal investment goals.

685–**Business Environment.** Three hours. Fall, Summer.

The relevant environmental pressures shaping the corporation are explored: government, labor, values and ethics, innovation and technology.

692–**Special Problems.** Three hours.

This is a closely supervised course in individual study and research emphasizing some issue of special interest to the student that falls within the scope of materials that are taught in the department.

697–**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

FOOD AND NUTRITION (F&N – 815)

530–**Experimental Foods.** Three hours. Fall, Spring.

Prerequisite: F&N 362.

560–**Advanced Nutrition.** Three hours. Fall.

Prerequisite: F&N 362.

561–**Diet in Disease.** Three hours. Winter.

Prerequisite: F&N 560.

570—**The School Lunch.** Three hours. Spring.

571—**Institution Food Purchasing.** Three hours. Winter.

662—**Community Health and Nutrition.** Three hours. Spring.

663—**The Nutrition of Children.** Three hours. As needed.

664—**Seminar in Food and Nutrition.** One to four hours. Winter, Summer.

672—**Quantity Food Preparation.** Three hours. Summer.

Prerequisite: Approval of instructor.

One lecture and six hours of laboratory per week.

673—**School Lunch Supervision.** Three hours. As needed.

674—**Institution Organization and Administration.** Three hours. Fall.

Analysis of quantity food service operations as related to methods of control, selection and training of personnel, labor laws, employer-employee relationships so as to produce a system of order into a group of related activities and provide the means for their direction and development.

691—**Research in Food and Nutrition.** One to four hours. Quarterly.

692—**Special Problems in:**

a. Nutrition. One to four hours.

b. Institutional Management. One to four hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours. Credit deferred until thesis is completed.

FOREIGN LANGUAGES (FL — 228)

500—**Introduction to Exotic Languages.** Three hours. Quarterly.

May be taken for a total of nine hours.

501—**Advanced Credit for Study Abroad.** Three to nine hours. Quarterly.

Prerequisite: Advanced knowledge of the language to be studied; otherwise, same as FL 301. (See FL 301 in undergraduate catalog.)

502—**Introduction to the Advanced Study of Foreign Literature.** Three hours. Spring.

503—**Translation.** Three hours. As needed.

May be taken for a total of nine hours.

504—**Methods of Teaching Foreign Language.** Three hours.

May be taken for a total of six hours.

515—**French: History of Literature.** Three hours. Quarterly.

May be taken for a total of twelve hours.

525—**German: History of Literature.** Three hours. Quarterly.

May be taken for a total of twelve hours.

531—**Greek: Three.** Three hours. Fall, Spring.

532—**Greek: Four.** Three hours. Fall, Spring.

535—**Greek: Readings in Literature.** Three hours. As needed.

May be taken for a total of nine hours.

555—**Latin: Readings in Literature.** Three hours. As needed.
May be taken for a total of nine hours.
565—**Russian: History of Literature.** Three hours. As needed.
May be taken for a total of twelve hours.
575—**Spanish: History of Peninsula Literature.** Three hours. Spring.
May be taken for a total of twelve hours.
576—**Spanish: History of Latin American Literature.** Three hours.
May be taken for a total of twelve hours.
691—**Research.** Three hours.
692—**Special Problems.** One to three hours.
May be taken for a total of nine hours.
697—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.
698—**Thesis.** Six hours.
711—**French: Old French.** Three hours. As needed.
May be taken for a total of six hours.
712—**French: Seminar.** Three hours. Quarterly.
May be taken for a total of eighteen hours.
721—**German: Middle High German.** Three hours. As needed.
May be taken for a total of six hours.
722—**German: Seminar.** Three hours. Quarterly.
May be taken for a total of eighteen hours.
771—**Spanish: Old Spanish.** Three hours. As needed.
May be taken for a total of six hours.
772—**Spanish: Seminar.** Three hours. Quarterly.
May be taken for a total of eighteen hours.

GENETICS (GEN – 312)

502—**Genetics.** Three hours. Quarterly.
Four hours lecture per week.
Prerequisite: MIC 101 or BIO 101; one quarter of organic chemistry recommended.
The fundamental principles of heredity.
503—**Advanced Genetics.** Four hours. Spring, alternate years.
Prerequisites: GEN 451-551 or 402-502.
A continuation of GEN 402-502. Study of phenotypic effects of genes, of radiations and other mutagens, population genetics, speciation, microbial genetics, and regulations of gene action.
511—**Physiological Genetics.** Three hours. Fall, alternate years.
Prerequisite: GEN 402-502 or 451-551.
Recent advances in physiological genetics. Attention will be directed to literature on the nature of genes and to the interaction of heredity and

environment in the expression of the characteristics of higher organisms.

521—**Interpretation of Biological Data.** Three hours. Winter, alternate years.

Prerequisites: GEN 402-502 or 451-551.

Techniques applicable to the design and interpretation of biological research data.

551—**Medical Genetics.** Three hours. Fall, Winter, Summer.

Four hours lecture per week.

The basic principles of human genetics with emphasis on the causation of abnormality and disease.

561—**Microbial Genetics.** Three hours. Fall, alternate years.

Four hours lecture per week.

Prerequisites: MIC 301 and GEN 403-503.

The genetics and molecular biology of microorganisms and their viruses. Mutation, transformation, transduction, conjugation, sex factors, and other plasmids studied.

789—**Genetics Seminar I, II, III.** One hour each. As needed.

The presentation and defense of current, classical concepts and principles of genetics.

691—**Research in Genetics.** One to nine hours.

692—**Special Problems in Genetics I, II, III, IV.** Two hours each.

Prerequisite: A thorough background in genetics.

Individuals will be assigned some specific problem in genetics to investigate under faculty direction. Credit will be determined by the quality and quantity of work done varying from two to a maximum of eight hours.

697—**Independent Study and Research.** One to nine hours.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

731—**Cytogenetics.** Three hours. As needed.

Two hours lecture and four hours laboratory per week.

Prerequisite: GEN 402-502 or permission of instructor.

Relationships between cytological and genetic systems.

771—**Dynamics of Experimental Populations.** Three hours. As needed.

Prerequisites: GEN 402-502, 403-503, or permission of instructor.

Review of concepts associated with phylogeny with particular attention to factors associated with changes in population structure leading to the formation of species.

791—**Research in Genetics.** One to nine hours.

792—**Special Problems.** Three hours.

797—**Independent Study and Research.** One to nine hours.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

898—**Dissertation.**

GEOGRAPHY (GHY – 268)

510–**Advanced Cartography.** Three hours. Winter.
Prerequisite: GHY 210.
511–**Aerial Photograph Interpretation.** Three hours. Fall.
512–**Remote Sensing of the Environment.**Three hours. Winter.
Prerequisite: GHY 511 or consent of instructor.
513–**Field Methods in Geography.** Three hours. Spring.
514–**Urban Field Methods.** Three hours. Spring.
Prerequisite: GHY 560 or consent of instructor.
516–**Computer Applications in Geography.** Three hours. Winter.
Prerequisite: GHY 315 or consent of instructor.
522–**Geography of Soils and Vegetation.** Three hours. Spring.
Prerequisite: GHY 224 or consent of instructor.
525–**Environmental Climatology.** Three hours. Winter.
Prerequisite: GHY 223 or PHY 477-577.
540–**Population and Settlement Geography.** Three hours. Winter.
Prerequisite: GHY 331 recommended.
551–**Industrial Location Analysis.** Three hours. Spring.
Prerequisite: GHY 350 or consent of instructor.
552– **Rural Land Use.** Three hours. Spring.
Prerequisite: GHY 350.
553–**Transportation Geography.** Three hours. Winter.
Prerequisite: GHY 350.
560–**Urban Geography.** Three hours. Fall.
Prerequisite: GHY 350.
565–**Urban and Regional Planning.** Three hours. Winter, Summer.
Prerequisite: GHY 350 or 560 or consent of instructor.
571–**Resource Management: Theories, Methods, and Models.** Three hours. Winter.
572–**Forest Resource Management.** Three hours. Summer.
Prerequisite: GHY 370 or consent of instructor.
573–**Water Resources.** Three hours. Fall.
574–**Watershed Management.** Three hours. Spring.
Prerequisite: Consent of instructor.
591–**Geography Internship.** Three to nine hours. May be repeated for a total of nine hours. Quarterly.
Prerequisite: Consent of instructor.
610–**Seminar in Research Techniques and Presentation of Geographic Data.** Three hours. Fall.
623–**Seminar in Physical Geography.** Three hours. Not offered during 1973-1974.
631–**Seminar in Cultural-Historical Geography.** Three hours. Not offered during 1973-1974.
650–**Seminar in Economic Geography.** Three hours. Summer.
665–**Seminar in Urban and Regional Planning.** Three hours. Spring.
671–**Seminar in Resource Management.** Three hours. Spring.

673—**Seminar in Water Resources.** Three hours. Winter.

Prerequisite: Consent of instructor.

680—**Seminar in History and Development of Geographic Thought.** Three hours. Winter.

692—**Special Problems.** Three hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

GEOLOGY (GLY – 340)

501—**Principles of Stratigraphy.** Three hours. Fall.

Four hours lecture; weekend field trip.

Prerequisite: GLY 241, 308, or permission of instructor with supervised catch-up readings.

503—**Optical Mineralogy.** Three hours. Winter.

Three hours lecture and two hours laboratory per week.

Prerequisites: GLY 301 and MAT 103.

Introduction to optical mineralogy.

505—**Sedimentology.** Three hours. Winter.

Three hours lecture and two laboratory hours per week.

Prerequisite: GLY 301; 304 recommended.

Origin of sedimentary particles, sedimentary structures, and classification of sedimentary rocks.

507—**Petrography.** Three hours. Spring.

Two hours lecture and four hours laboratory per week.

Prerequisites: GLY 304 and 403.

Systematic study of rocks by means of the polarizing microscope.

510—**Elements of Geochemistry.** Three hours. Winter.

Four lectures per week.

Prerequisites: GLY 301 and 302, and CHE 103.

Chemical processes operative in geology.

520—**Elements of Geophysics.** Three hours. Winter.

Three lectures and one laboratory per week.

Prerequisites: MAT 103, PHY 103 (or 203), GLY 101, or permission of instructor with supervised catch-up readings.

Terrestial magnetism and electricity. Gravitational field variations and measurements. Seismic reflection and refraction. Nuclear geology. Surface and subsurface measurements. Concepts and significance of geophysical variations.

541—**Paleoecology.** Three hours. Spring, alternate years.

Two lectures and four hours laboratory per week; field trips.

Prerequisites: GLY 241 and BIO 461, or permission of instructor with supervised catch-up readings.

A study of the relationship between ancient organisms and the environment in which they lived.

543–**Micropaleontology I.** Three hours. Spring, alternate years.

One hour lecture and six hours laboratory per week.

Prerequisites: GLY 241.

Taxonomy, morphology, and stratigraphic use of Foraminifera.

550–**Introductory Oceanography.** Three hours. Fall.

Prerequisite: GLY 103, PHY 103, CHE 103, or permission of instructor with supervised catch-up readings.

Geological study of continental margins and ocean basins.

552–(GCRL 331) **Physical Marine Geology.** Three hours. Gulf Coast Research Laboratory. Summer.

Prerequisites: GLY 101 and 103; 309 and 405 recommended.

Geological processes, sedimentary environments and geomorphological features of marine coastal, intertidal and near-shore zones.

554–(GCRL 332) **Chemical Marine Geology.** Three hours. Gulf Coast Research Laboratory. Summer.

Prerequisites: GLY 101, 309 and CHE 101, 304.

Supervised research on the chemistry of the coastal waters of Mississippi and geochemistry of the bottoms.

570–**Petroleum Geology.** Three hours. Fall, alternate years.

Two lectures and four hours laboratory per week.

Prerequisite: GLY 308 and 401, or permission of instructor with supervised catch-up readings.

The origin, occurrence, migration, and accumulation of oil and gas.

572–**Economic Geology.** Three hours. Spring.

Three lectures and four hours laboratory per week.

Prerequisites: GLY 301, 304 and 308.

Principles of ore deposits. A formal geology report will be required.

574–**Geological Excursion.** One hour. May be repeated, in a different region, for four hours credit.

Field studies of geological phenomena in areas remote from the campus, by means of 8-10 day field trips, between quarters. Must be registered for at registration time of quarter preceding the trip; credit granted during the quarter following the trip, after completion of field report. Transportation fee will be assessed, dependent on length of trip.

692–**Special Problems in Geology I, II, III.** One to three hours each, by arrangement.

Open to graduate students only, who will be assigned a specific problem for investigation which shall not be related to thesis research.

697–**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698–**Thesis.** Six hours.

700—**Paleoclimatology.** Three hours. Winter, alternate years.

Prerequisite: GLY 101, 103, and 241, or permission of instructor with supervised catch-up readings.

Methods of investigation and evidence regarding the determination of climatic conditions of the past as based on the rock, mineral and biologic record.

701—**Pleistocene Geology.** Three hours. Spring, alternate years.

Prerequisites: GLY 101, or permission of instructor with supervised catch-up readings.

Geologic history of the earth since the beginning of the Pleistocene Epoch with emphasis on glacial phenomena.

702—**Hypotheses of Continental Drift.** Three hours. Winter, alternate years.

Prerequisites: GLY 101 and 103, or permission of instructor with supervised catch-up readings.

Examination of the evidence regarding and concepts advanced with respect to large-scale crustal dislocations, with emphasis on the hypothetical former contiguity of South America and Africa.

703—**Sedimentary Environments.** Three hours. Spring, alternate years.

Prerequisites: GLY 101 and 103, or permission of instructor with supervised catch-up readings.

Comparison between modern studies of environments of sedimentation and the sedimentary record of paleoenvironments.

704—**Tectonics.** Three hours. As needed.

Prerequisites: GLY 308, or permission of instructor with supervised catch-up readings.

Examination of large-scale disturbances of the earth, stresses and strains involved, and methods of response.

705—**Petrology of Igneous Rocks.** Three hours. Fall, alternate years.

Prerequisites: GLY 403, 407; 410 desirable.

Origin, classification, composition, and geochemistry of igneous rocks.

706—**Petrology of Metamorphic Rocks.** Three hours. Fall, alternate years.

Prerequisites: GLY 403, 407; 410 desirable.

Origin, classification, composition, and geochemistry of metamorphic rocks.

708—**Gulf Coast Geology.** Three hours. Fall, alternate years.

Prerequisites: GLY 308 and 401.

Lectures, discussions, and field trips.

Sediments and stratigraphic problems of the Gulf Coastal Region.

730—**Principles of Geology for High School Science Teachers.** Three hours. Fall.

Two hours lecture and four hours laboratory per week.

Prerequisites: Bachelor's degree in science or its equivalent.

Principles of physical and historical geology for teachers. This course can not be applied toward a major or minor in geology.

740—**Advanced Micropaleontology.** Three hours. As needed.

Prerequisite: GLY 543, or permission of instructor with supervised catch-up readings.

789—**Seminar.** One hour. As needed.

May be repeated once for a total of two hours credit.

HEALTH (HTH – 715)

510–**Health Education in Elementary Schools.** Three hours. Winter, Spring.

Methods and materials for the elementary teacher, with special emphasis on instruction and on coordination of school and community health programs.

511–**Health Education in the Secondary Schools.** Three hours. Fall, Winter, Spring.

Primarily for students majoring or minoring in health and physical education. Materials and techniques for high school teachers of health; conducting the school health program at the secondary level.

512–**Measurement and Evaluation in Health Education.** Three hours. Winter, Spring.

A survey of evaluation instruments for appraising personal health, measuring health knowledge, attitudes, interests and practices, and the interpretation of these data.

515–**School Health.** Three hours. Winter, Spring.

Organization and operation of school health programs with emphasis on policies, procedures, problems, cooperating agencies, and field work.

520–**Communicable and Chronic Diesease in Man.** Three hours. Fall, Spring.

Problems, control programs, and prevention of communicable and chronic disease in modern society.

521–**Sanitation.** Three hours. Winter.

Problems of sanitation in the home and school, in food producing and handling, water supply, waste and excreta disposal. Based on an understanding of general biology.

522–**Drugs in Society.** Three hours. Fall, Spring.

Prerequisite: HTH 101 or permission of instructor.

Psycho-social, medical, legal, and health aspects of drugs and their abuse, plus a current analysis of the problem in our society.

530–**Marriage and Human Sexuality.** Three hours. Fall, Winter, Spring.

Physical, emotional, and medical basis for successful courtship, marriage, and parenthood.

540–**Driver Education.** Three hours. Fall, Winter, Spring.

Driver education provides an opportunity for public school teachers to obtain information on such items as programs of instruction, use of training cars, delegation of authority, legal responsibilities, and qualifications of teachers.

541–**Traffic Safety Education.** Three hours. Spring.

An in-depth study into the major problems in traffic safety. The driver, pedestrian, engineering, and enforcement will be the principal areas to be examined.

542–**Laboratory Programs in Driver Education.** Three hours. Winter.

An examination of the aims, objectives, and role of laboratory programs in driver education. Directed laboratory experiences will be provided.

543–**Methods of Driver and Traffic Safety Education.** Three hours. Fall, Winter, Spring.

Prerequisite: HTH 540.

Organization and administration of the driver education program, including scheduling, financing, and developing good public relations, will be primary areas of study.

544—**Simulation in Driver Education.** Three hours. Fall, Winter, Spring.

Prerequisites: HTH 540 and 543.

Simulation is an audiovisual instructional method that has been designed to complement and supplement other instructional techniques utilized in the driver education program to prepare individuals to function safely and effectively in today's traffic.

692—**Special Problems.** Three hours.

697—**Independent Study.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours. Credit deferred until thesis is completed.

710—**Seminar In Health.** Three hours.

711—**Advanced Personal and Community Hygiene.** Three hours. Fall.

Intensive study in personal and community hygiene.

715—**The School Health Program.** Three hours. Winter.

This course deals with the organization and operation of the school health services. Means of developing school health services, safe and healthful school environment, and effective school-community relationships are especially emphasized.

720—**Community Organization for Health Education.** Three hours. Spring.

Study of the philosophies of the community and the organizations that deal with health, with emphasis on group work techniques and their use in organizing the community for work in health education; current research in community organizations, and examination of programs of community health agencies.

730—**Marriage and Parenthood Education.** Three hours. Winter.

This course is designed to help students who are interested in programs and materials for marriage and family life; social adjustment problems related to high school and college; special problems of counseling with these groups; and sources and methods of research.

740—**Facilities and Equipment in Driver Education Programs.** Three hours. Spring.

Planning for facilities and equipment for driver education programs with special consideration given to recommendation by the National Highway Safety Bureau and the American Driver and Traffic Safety Education Association.

741—**Multi-Media Systems in Driver Education Programs.** Three hours. Spring.

This course will deal with unique adaptation of newer media systems to the broad problems in driver and traffic safety.

742—**Organization and Administration of Driver and Traffic Safety Education.** Three hours. Winter.

Organization and administration aspects of driver and traffic education as they relate to the total school and other specialized programs. Historical and

philosophical aspects, evaluation, related professional organizations, and occupational opportunities.

743—**Addictive Substances as Related to Traffic Safety Education.** Three hours. Fall.

A study of the nature and effect of addictive substances on the human body and the resulting problems in traffic safety.

744—**Psychological Factors in Driver and Traffic Safety Education.** Three hours. Winter.

A study of behavior with emphasis on attitudes, motivation, and adjustment and their relationship to safe driving. Investigation of principles and methods appropriate in identifying, understanding, and modifying unsatisfactory behavior.

745—**Safety Education.** Three hours. Fall, Spring.

A study of the general program of safety education in public schools, with special reference to the selection and organization of materials, including the methods and techniques of instruction; visual aids, safety projects, special programs, and the utilization of the agencies outside the school.

770—**Care and Treatment of Athletic Injuries.** Three hours. Winter.

Modern techniques and facilities to provide adequate prevention and treatment of athletic injuries.

780—**Research Techniques.** Three hours. Winter, Summer.

Discovery and recognition of problems, evaluation of problems and procedures, types and techniques of research.

791—**Research in Health.** One to nine hours.

Prerequisite: Approval of the major professor.

792—**Special Problems in Health.** Three hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

898—**Dissertation.**

HISTORY (HIS – 272)

510—**Russia to 1917.** Three hours. Fall.

511—**Russia Since 1917.** Three hours. Spring.

512—**English Constitutional History.** Three hours. Spring.

513—**Medieval Life and Thought.** Three hours. Winter.

514—**Modern Germany.** Three hours. Winter.

515—**French Revolution and Napoleon.** Three hours. Fall.

516—**Europe 1815-1870.** Three hours. Winter.

517—**Europe 1870-1918.** Three hours. Spring.

518—**Europe 1918-1939.** Three hours. Winter.

519—**Europe Since 1939.** Three hours. Spring.

520—**Modern France.** Three hours. Fall.

521—**Tudor-Stuart Britain.** Three hours. Fall.

522—**Nineteenth Century Britain.** Three hours. Winter.

523—**Twentieth Century Britain.** Three hours. Spring.

540—**Age of Jefferson and Jackson.** Three hours. Fall.

541—**American Thought and Culture.** Three hours. Spring.

542—**The Old South.** Three hours. Fall.

543—**The New South.** Three hours. Winter.

544—**United States Constitutional History.** Three hours. Winter.

545—**U.S. Foreign Relations to 1914.** Three hours. Winter.

546—**U.S. Foreign Relations Since 1914.** Three hours. Spring.

547—**Colonial America.** Three hours. Fall.

548—**Revolutionary Era.** Three hours. Winter.

549—**American Political Leaders.** Three hours. Spring.

550—**Early American Frontier.** Three hours. Winter.

551—**Trans-Mississippi West.** Three hours. Spring.

552—**The Sectional Controversy and the Civil War, 1840-1865.** Three hours. Spring.

553—**Reconstruction and the Emergence of Modern America, 1865-1898.** Three hours. Fall.

554—**The Progressive Era, World War I, Prosperity and Depression, 1898-1933.** Three hours. Winter.

555—**The New Deal, World War II, and Post-War America, 1933-Present.** Three hours. Spring.

580—**History of Mexico and Caribbean.** Three hours. Fall.

581—**History of South America: The Andean Countries.** Three hours. Winter.

582—**History of South America: Brazil and the Rio de la Plata.** Three hours. Spring.

692—**Special Problems I, II, III, IV.** One hour each.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

710—**European Historiography.** Three hours. Winter.

711—**Medieval History.** Three hours. Spring, 1973-74.

712, 713, 714—**Seminar in European History, 1870 to Present. I, II, III.** Three hours each. Spring, 1973-74; Fall, 1973-74; Fall 1974-75.

716—**British History.** Three hours. As needed.

717, 718—**Reading Seminar in European History I, II.** Three hours each. Spring, Summer.

740—**American Historiography.** Three hours. Fall.

741—**Seminar in Southern History.** Three hours. Summer, 1973-74.

742—**Seminar in U.S. Diplomatic History.** Three hours. Winter.

743—**Seminar in American Colonial and Revolutionary Period.** Three hours. Fall, 1973-74.

744—**Seminar in Nineteenth Century U.S.** Three hours. Fall, 1973-74.

745—**Seminar in Twentieth Century U.S.** Three hours. Spring.

746, 747—**Reading Seminar in American History I, II.** Three hours each. Winter, Spring.

780—**Latin American History.** Three hours. As needed.

791—**Research in History.** One to nine hours.

Prerequisite: Approval of the major professor.

794—**Internship in the Teaching of History.** Three hours. As needed.

Required of all Ph.D. candidates who have no teaching experiences at the college or university level and optional for those with such experience. Each student will teach under his supervisory professor a section of History 101, 102, 111, or 112.

796—**Seminar and Practicum in the Teaching of History in Collegee and Universities.** Three hours. As needed.

Required of all Ph.D. candidates and open to select M.A. candidates. The course will emphasize the following areas: professional ethics, professional organizations, publications, education philosophy, faculty-study relationships, community relationships. Special consideration will also be given to the mechanics of lecture preparation, testing, and methodology. Concurrently with the seminar the student will be assigned to a professor and will work closely with that professor in preparing lectures, and preparing and grading examinations. He will present a minimum of four supervised lectures.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

898—**Dissertation.**

HOME ECONOMICS EDUCATION (HEE – 820)

601—**Home Economics in American Education.** Three hours. As needed.

This course is a brief survey of home economics in American education. It is designed to give understanding of the trends and issues in curriculum development, instruction, guidance, supervision, administration and research in this field.

602—**Advanced Adult Education.** Three hours. Summer.

A study of the adult home economics education programs with experiences which will help toward effective participation in them whether for the gainfully employed or the full-time homemaker. Special problems will be included.

603—**Teaching Family Living on the Secondary Level.** Three hours. Fall.

604—**Consumer Home Economics Education.** Three hours. As needed.

A course designed to acquaint the student with consumer problems in our present day society. Curriculum materials pertinent to teaching consumer education on the secondary level will be developed.

605—**Supervision of Home Economics.** Three hours. Winter.

Designed for high school home economics teachers interested in the student-teacher program. The course stresses the supervisory practices and precedures for promoting student-teacher growth and development. Supervisory problems in guidance of students for home economics education teachers will be included.

606—**Selected Topics in Home Economics Education.** Two hours. As needed. (May be repeated four times but limited to four hours toward a degree.)

Prerequisite: The corresponding subject matter course.

The development and application of units of work in selected areas for Levels I, II, and III in the secondary school program.

607—**Curriculum Problems in Home Economics.** Three hours. Spring.

A course for teachers which deals with problems in curriculum making. It will include the place of home economics education in the total school curriculum for that specialized area. Opportunity will be given for students to work out practical problems relating to their local schools.

608—**Home Economics in Higher Education.** Three hours. Fall

Home economics at the college level will be studied with special reference to that of the junior college. Problems in development of curriculum, in college instruction, in guidance of students, in administrative problems, and in evaluation of a department will be considered.

609—**Home Economics Related Occupations.** Three hours. Summer.

The exploration and planning of teaching units for home economics related occupations.

610—**Seminar in Home Economics Education.** One to four hours.

691—**Research in Home Economics Education.** One to four hours.

692—**Special Problems in Home Economics Education.** One to four hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours. Credit deferred until thesis is completed.

HOUSING AND HOME MANAGEMENT (H&HM – 825)

640—**Home Engineering.** Three hours. As needed.

This course includes a study of the selection, placement, and storage of home appliances and their use as related to the mechanical features. Considerable time will be spent in design characteristics of the various appliances and the media used. The adaptation of certain activities to adult programs, as well as to the junior and senior high school, will be made.

644—**Seminar in Housing and Home Management.** One to four hours. As needed.

692—**Special Problems in any of the following areas:** One to four hours.

a. Household Equipment

b. Housing

c. Home Furnishings
d. Home Management.

INDUSTRIAL AND TECHNICAL EDUCATION (ITE – 165)

500–**School Shop Planning and Equipment Selection.** Three hours. Fall.

Planning the lay-out of rooms and other building facilities. Purchase and arrangement of equipment. Selection of suitable equipment for special conditions. The cost of equipment, supplies, and maintenance.

501–**Shop Care and Management.** Three hours. Winter.

A study of machine placement; student movement; arrangement of safety zones; upkeep and repair of tools; tool storage and distribution; storage of materials; assembly areas; general appearance of the shop.

503–**Occupational Analysis and Course Construction.** Three hours. As needed.

Techniques and procedures in analyzing occupations into their basic elements and arranging these elements for instructional purposes.

504–**Problems of the Coordinator.** Three hours. Summer, and as needed.

Problems, procedures, and techniques in the operation of cooperative, part-time, and evening school programs, including the study of state and federal regulations and reporting.

521–**Power Transmission.** Three hours. Winter.

Study of mechanical, hydraulic, pneumatic, and electrical power amplification and transmission.

531–**Principles of Trade and Industrial Teaching.** Three hours. Summer, and as needed.

Interest and the motivation of learning in the shop, the development of reasoning ability and manipulative skill, job and lesson planning, teaching devices and procedures, shop management, measurement of achievement, interschool and community relations.

532–**Problems in Adult Education.** Three hours. As needed.

Rise of the adult education movement; learning abilities, educational interests and needs of adults; problems and procedures in organizing and operating adult educational programs; relation of adult education to public school education.

533–**Curriculum Construction for Cooperative and Adult Vocational Classes.** Three hours. As needed.

The derivation of objectives; selection and arrangement of instruction units and materials for cooperative and evening classes; the construction and use of evaluative devices.

534–**Occupational Surveys.** Three hours. As needed.

A study of problems, methods, and procedures involved in planning, organizing and conducting occupational surveys in local communities and labor market areas.

535–**Instructional Materials for Industrial Education.** Three hours. Summer.

Identification, selection, development and use of various instructional aids and materials.

536—**Curriculum Construction for Vocational Technical Education.** Three hours. As needed.

Principles, practices, and techniques in planning and establishing a curriculum in Vocational Technical Education.

581—**Testing and Evaluation in Vocational Technical Education.** Three hours. Summer.

Development and administration of teacher-made tests for measuring achievement. Evaluation and use of published tests; including paper and pencil, objective, and manipulative tests.

582—**School Shop Safety.** Three hours. Fall, Summer.

Analysis of fundamentals of accident prevention and their application to school shop supervision and management.

602—**Foundations and Principles of Industrial Arts.** Three hours. Spring.

A basic course of the underlying philosophy and principles of industrial arts education. Objectives and relations to allied fields. Research and individual reports required.

603—**Establishing the Industrial Arts Program.** Three hours. Winter.

A detailed consideration of the individual school program in industrial arts, its organization, physical and education requirements, and coordination with other educational requirements. Specific problems studied and reported.

604—**Shop and Small Plant Design.** Three hours. As needed.

Fundamental problems in design of work space. Working drawings and reports required.

605—**History of Industrial Education.** Three hours. Fall.

A study of leaders, movements, and agencies in the development of industrial education. A critical consideration of economic and social factors in the development of industrial education in the United States is made.

606—**Philosophy of Industrial Arts Education.** Three hours. Fall.

A study and evaluation of the various viewpoints of the leading philosophers in the field.

607—**Organization of Instructional Materials in Industrial Education.** Three hours. Winter, Summer.

A systematic examination of instructional materials and methods in industrial arts; research and report required.

611—**Philosophy and Organization of Vocational Education.** Three hours. Spring.

The basic principles involved in the development and operations of vocational programs under state and federal vocational laws.

630—**Advanced Graphic Science.** Three hours. As needed.

A study of the methods and materials used in graphic science, advanced engineering and architectural drafting. Study of the literature and techniques in this field.

662—**Research Methods: Industrial Arts.** Three hours. As needed.

A study of research methodology in industrial subjects with emphasis on design of experiments, research procedures, and statistical treatments.

689—**Seminar in Industrial Arts Problems I, II, III.** Two hours each. May be taken three quarters. As needed.

692—**Special Problems in Industrial and Technical Education.** One to three hours.

Intensive study of a selected research area or problem in industrial and technical education.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours. Credit deferred until thesis is completed.

JOURNALISM (JOU – 212)

521—**Public Relations.** Three hours. Fall.

522—**Publicity Methods.** Three hours. Winter.

525—**Business and Professional Publications.** Three hours. Winter, alternate years.

528—**Public and Press Relations Management.** Three hours. Spring, alternate years.

570—**Newspaper Organization and Management.** Three hours. Fall, alternate years.

LIBRARY SCIENCE (LS – 170)

570—**Multi-Media Materials and Services.** Three hours. Winter.

Principles and methods of developing multi-media materials and services in modern libraries. Emphasis is placed on the selection, evaluation, acquisitions, organization, storage, and utilization of multi-media in various types of libraries.

571—**Library Preparation and Production of Multi-Media Materials.** Three hours. Spring.

Fundamental techniques for design and production of multi-media materials for the purpose of using the various libraries and media centers with emphasis on laboratory practice in the preparation and production of such materials.

572—**Administration and Supervision of School Media Center.** Three hours. Summer.

Prerequisite: LS 570 or LS 571.

A survey of the current trend for a media center in the modern school system with special attention to standards, planning, administration, personnel, facilities and equipment, materials, services, and management procedures of print and non-print materials.

591—**Library Workshop.** Three hours. Summer.

An intensive course through group study in the analysis of library problems with special attention given to current trends in school library and media center practice. Full-time work for two weeks, offered during the summer quarter, to be conducted through the cooperative efforts of the Department of Library

Science and the Mississippi State Department of Education. May be taken twice.

604—**Reference Resources and Services.** Three hours. Fall.

The selection, evaluation, and use of general reference resources with emphasis on major types of reference works; provides the student with a working knowledge of the library as an information, study, or research center in the solution of typical reference problems.

608—**Principles of Classification and Cataloging.** Three hours. Winter.

A study of principles with practice in classifying and cataloging books and other library materials according to Dewey Decimal Classification, Anglo-American rules, and Sears subject headings with emphasis on the organization and function of the card catalog; the use and applications of printed cards and the organization of library resources for services in various types of libraries.

610—**The Library in Society.** Three hours. Summer.

The library as a social institution, its background, and the forces that have shaped its development. Particular attention is given to the public library's relationship to social, governmental, and educational agencies, and the national and international role of the library.

620—**History of Books and Printing.** Three hours. Fall.

The evolution of the book from the earliest times to the present. An examination of the invention and spread of printing and its impact on the structure of society.

625—**Communication and Libraries.** Three hours. Winter.

Introduction to the audience, content, control, and channels of distribution of newspapers, radio, television, and motion pictures, with special attention to the relationship of the library to these media and its role as an agency of communication.

630—**Advanced Reference and Bibliography.** Three hours. Fall.

The study of major bibliographic and reference sources common to large research and reference collection. The importance of national and trade bibliographies for research and their use in library acquisition.

635—**Advanced Classification and Cataloging.** Three hours. Winter.

Problems in classification and cataloging, including serials, corporate entries, Library of Congress classification, and foreign rules of entry. The theory and practice of classification and subject headings.

640—**The College and University Library.** Three hours. Winter.

The development of the college and university library. Emphasis upon the role of the library in higher education, and upon problems of administration, personnel, financing, and buildings and equipment of academic libraries.

641—**The Public Library.** Three hours. Spring.

The development of the public library as an institution; organization, administration, community responsibilities; the library board, finance, and physical facilities.

642—**Special Libraries.** Three hours. As needed.

A study of the rise of the special library with a consideration of the objectives, administrative structure, and problems of special libraries. Provision of an opportunity for each student to investigate a particular field of special librarianship.

650—**Library Service to Children.** Three hours. Fall.

Consideration of library service to children in public libraries and school libraries with emphasis upon objectives, functions, problems of administration.

655—**Library Service to Young People.** Three hours. Spring.

The study of objectives, functions, and problems of administration of library services provided by public libraries and high school libraries to young people.

660—**Introduction to Information Science and Technology.** Three hours. Fall.

An introductory survey of information science and technology as related to library operation; overview of approaches and techniques currently developed to meet the information demands of research oriented library users. Emphasis is placed on terminology, historical background, system design and analysis, technological development, dissemination, organization, collection, storage, retrieval, interpretation, use of information and their potential for library information services.

661—**Library Automation.** Three hours. Spring.

A study of theory and practices in the application of electronic data processing equipment and utilization of automatic procedures for the performance of various library functions. Special attention is given to the augmentation of circulation, reference work, acquisitions, cataloging, book selection, serials control, inventory control, personnel and budget procedures.

662—**Information Retrieval Systems.** Three hours. Winter.

A survey and evaluation of the structure and operation of information storage and retrieval systems currently applied in libraries and information centers with special emphasis on abstracting, indexing, file organization, question analysis, research strategy, thesaurus construction and use.

665—**Bibliography and Literature of the Humanities.** Three hours. Fall.

Selection, evaluation, and utilization of library resources in the humanities with special attention to the development of collections in philosophy, religion, literature, art, music, and related fields.

666—**Bibliography of the Social Sciences.** Three hours. Winter.

Study and evaluation of major library resources in the social sciences with emphasis given to the development and growth of bibliographic and reference materials in the fields of history, political science, economics and business, geography, psycholoby, education, sociology and social welfare, anthropology, and related fields.

667—**Bibliography of Science and Technology.** Three hours. Spring.

An intensive study of library materials used in building collections and providing information in the pure and applied sciences. Special attention to such pure sciences as physics, chemistry, and biology, and to applied sciences of engineering, technology, agriculture, and related fields.

668—**Research Methods in Library and Information Sciences.** Three hours. Summer.

A survey of scientific research methods and their application to the fields of library and information sciences; designed to prepare students to select, formulate, and develop research projects as well as evaluate completed research in library and information sciences and related areas.

691—**Research in Library Science.** One to twelve hours. Hours arranged.

692—**Special Problems I, II, III.** One to three hours. Hours arranged.
Prerequisite: LS 640, 641, 642.
Intensive reading and investigation of a selected problem in the student's field of particular interest.
694—**Field Problems.** Three hours. As needed.
697—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.
698—**Thesis.** Six hours.

MANAGEMENT (MGT – 620)

568—**Wage and Salary Administration.** Three hours. Quarterly.
Prerequisite: MGT 360.
A study of wage and salary levels and structures including job analysis, job evaluation, wage surveys, and incentive systems.
572—**Collective Bargaining.** Three hours. Quarterly.
Prerequisite: MGT 370.
A study of the practices, techniques, procedures, methods, and legal and administrative requirements of collective bargaining relationships.
582—**Production Problems Seminar.** Three hours. Fall, Spring.
Prerequisite: Consent of instructor.
A case approach to the study of selected current problems in manufacturing management.
584—**Problems in Personnel Administration.** Three hours. Quarterly.
Prerequisite: Consent of instructor.
An application through problem solving and case analysis of the principles and techniques in personnel administration decision making.
610—**Production Management.** Three hours. Spring.
An analysis of managerial production functions and processes by focusing upon the transformation of inputs into goods and services. Input factors of management, materials, land, labor, and capital will be interrelated with production functions.
615—**Operations Research.** Three hours. Fall, Spring.
An introductory course in the principles and techniques of operations research and management science.
620—**Problems in Management.** Three hours. Winter.
A case study of selected social, economic, industrial, and personnel management problems.
625—**Human Relations in Business.** Three hours. Fall, Winter, Summer.
A study of the problems of individuals and groups as found in modern organizations.
630—**Survey of Labor-Management Relations.** Three hours. Spring.
Prerequisite: Permission of department chairman.

A survey of the development of contemporary state of industrial relations, labor law, and collective bargaining.

660—**History and Philosophy of Management.** Three hours. Summer.

A review of and analysis of the writings of Taylor, Gilbreth, Fayol, and later writers in the development of scientific and modern management.

665—**Organization Theory and Practice.** Three hours. Winter.

The design, analysis, and evaluation of organizational structures in a business environment. Included are contemporary developments in the behavioral sciences, communications, quantitative and scientific management.

670—**Business Policy.** Three hours. Spring, Summer.

Prerequisite: Completion of 15 hours of graduate work.

A study of the fields of policy-making and administration from a top management point of view. It integrates special fields of analysis and stresses the overall point of view in handling business problems.

692—**Special Problems in Management.** Three hours.

Prerequisite: Permission of department chairman.

MARKETING (MKT – 625)

524—**Market Research.** Four hours. Quarterly.

Prerequisites: MKT 300 and ECO 302.

A study of principles and techniques used in market research and evaluation of such research.

558—**Promotion Development.** Four hours. Winter.

A study of the relationship of the business organization to the various interest groups which affect its promotional results, and the policies and procedures utilized in connection with such groups.

528—**Marketing Management.** Four hours. Quarterly.

A comprehensive course designed to synthesize the more specialized marketing knowledge of the student. The interrelation of all marketing activities in reaching the firms objectives is emphasized through the study of case histories.

625—**Seminar in Marketing.** Four hours. Fall, Winter, Spring.

A survey of marketing theory and practices designed to give the non-marketing students functional knowledge of the field.

640—**Market Planning.** Four hours. Spring.

A case study of the methods used by firms to reach their marketing goals through the application of planning, budgeting, and costing theory. If feasible students work with cooperating local firms on actual problems.

650—**Market Research Seminar.** Four hours. Fall.

A study of advanced research techniques used in market analysis.

660—**Seminar in Marketing Theory.** Four hours. Winter.

A survey, analysis, and evaluation of the current research in marketing theory. Detailed attention is given to problems of determining the meaning and boundaries of marketing theory. The functional, psychological, and historical approaches are utilized. Emphasis is placed on the substantial content of

marketing theories and their methodologies.

692—**Special Problems in Marketing.** Four hours.

Permission of the chairman of the Marketing Department is required prior to registration.

MARRIAGE AND FAMILY LIFE (MFL — 830)

650—**Early Marriage Adjustment.** Three hours. Fall.

A study will be made of college marriages.

651—**Parents and Children.** Three hours. Winter.

652—**The Family in the Community.** Three hours. Spring.

Designed to help the teacher understand better the social setting in which students live and its importance in the development of family living courses to meet student needs.

658—**Seminar in Family Living.** One to four hours. Summer.

691—**Research in Family Living.** One to four hours. Quarterly.

692—**Special Problems in Family Living.** One to four hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours. Credit deferred until thesis is completed.

MATHEMATICS (MAT — 350)

510—**Mathematics for Teachers of Junior High School Mathematics.** Three hours. Winter, Summer.

Prerequisite: MAT 310.

Introduction to numbers and infinite sets, geometry, non-Euclidean geometry, coordinate geometry, trigonometry, functions, probability, statistics, nature of mathematics.

(Open only to elementary and special education majors.)

511—**Vector Analysis.** Three hours. Fall, Spring.

Prerequisite: MAT 379.

Vector algebra, differentiation of vector valued functions, analysis of space curves, scalar and vector field theory, line and surface integration with introduction to the divergence theorem, Green's theorem, and Stoke's theorem.

515—**Introduction to Differential Equations II.** Three hours. Winter.

Prerequisite: MAT 405.

Homogeneous and nonhomogeneous systems of linear differential equations, characteristic equations, operator methods, methods of approximating solutions, application of Laplace tranform to differential equations.

517—**Partial Differential Equations.** Three hours. Spring.

Prerequisites: MAT 405 and MAT 411.

Integrability conditions, differential geometry, quasilinear equations, linear equations, applications to physics, classifications of second order equations and canonical forms, the method of separation of variables.

518—**Linear Programming.** Three hours. Fall.

Prerequisite: MAT 326.

Convex sets, linear inequalities, general linear programming problems, extreme-point solutions, simplex computational procedure, applications.

520—**Statistics and Probability.** Three hours. As needed.

Sets, permutations, combinations, binomial and multinomial theorems, mathematical induction, graphic methods, basic statistical concepts.

521—**Number Theory.** Three hours. Winter, Summer.

Mathematical induction, the well-ordering principle, the division algorithm, the Euclidean algorithm, the Fundamental Theorem of Arithmetic, number theoretic functions, the theory of congruences.

523—**Modern Algebra I.** Three hours. Fall, Spring.

A development of the systems of integers, rational numbers, real numbers and complex numbers based on the properties of the natural numbers with emphasis on their structures.

524—**Modern Algebra II.** Three hours. Winter.

Prerequisite: MAT 423.

Subgroups, normal subgroups, quotient groups, permutation groups, homomorphisms and automorphisms of groups, Cayley's theorem.

525—**Fourier Series.** Three hours. As needed.

Prerequisites: MAT 326 and MAT 405.

Orthogonal functions, Fourier series, convergence of Fourier series, applications.

526—**Linear Algebra II.** Three hours. Fall, Spring.

Prerequisite: MAT 326.

Determinants, polynomials, complex numbers, single linear transformations, orthogonal, unitary and symmetric linear transformations.

535—**Laplace Transform.** Three hours. As needed.

Corequisite: MAT 405.

Laplace transforms, inverse transforms, the convolution theorem, differentiation and integration of transforms, applications to ordinary differential equations and linear partial differential equations.

536—**Theory of Functions of a Complex Variable I.** Three hours. Winter, Summer.

Prerequisite: MAT 379.

Complex numbers, functions of a complex variable, limits, continuity, differentiation, analytic functions, branch points and branches of multivalued functions, contour integration, power series, Taylor's theorem, Laurent's theorem.

541—**Advanced Calculus I.** Three hours. Fall.

Point set theory, sequences, continuity, uniform continuity, properties of continuous functions, limits, mean value theorems, L'Hospital's rule.

542—**Advanced Calculus II.** Three hours. Winter.

Prerequisite: MAT 441.

Riemann integration, Taylor's theorem, improper integrals, infinite series, uniform convergence.

543—**Advanced Calculus III.** Three hours. Spring.

Prerequisite: MAT 442.

Directional derivatives, partial derivatives, differentials, inverse functions, implicit function theorems, applications to geometry.

560—**Numerical Analysis I.** Three hours. As needed.

Prerequisites: MAT 326, CSS 240.

Methods of solving equations and systems of equations, error analysis, difference equations.

561—**Numerical Analysis II.** Three hours. As needed.

Prerequisites: MAT 405, MAT 460, and CSS 340.

The interpolating polynomial, numerical differentiation and integration, numerical solutions of differential equations, propagation of round-off error.

570—**Geometry.** Three hours. Fall, Spring.

Prerequisite: Secondary school geometry or MAT 410.

Essentially Euclidean geometry from a modern approach with brief mention of historical topics and some non-Euclidean geometries.

573—**Metric Spaces.** Three hours. As needed.

Continuity, Hausdorff and countability axioms, product topologies, Euclidean spaces, connectedness, compactness, Heine-Borell theorem, Bolzano-Weierstrass theorem.

575—**General Topology.** Three hours. As needed.

General topological spaces, bases and subbases, continuity, connectedness, separation axioms, countability axioms, compactness, metrizability.

576—**Algebraic Topology.** Three hours. As needed.

Prerequisites: MAT 424 and MAT 475.

The fundamental group, homology and cohomology groups, simplicial complexes.

601—**Differential Geometry I.** Three hours. As needed.

Prerequisite: MAT 411.

An introduction to the theory of plane curves, space curves, and surfaces.

603—**Modern Algebra.** Three hours. As needed.

Prerequisite: MAT 424.

A study of the structure of rings, ideals, integral domains, and fields.

605—**Differential Equations I.** Three hours. As needed.

Prerequisite: MAT 415.

Topics from the theory of ordinary differential equations. Specific topics to be selected by the instructor.

606—**Differential Equations II.** Three hours. As needed.

Prerequisite: MAT 417.

Dirichlet, Neuman, and mixed boundary value problems. Classical techniques of solution of partial differential equations. Applications to various scientific fields.

607—**Differential Equations III.** Three hours. As needed.

Prerequisite: MAT 606.

Topics to be selected by the instructor.

636—**Functions of a Complex Variable II.** Three hours. As needed.

Prerequisite: MAT 436.

Taylor series and Laurent series, residue calculus, conformal mapping with applications to physical problems, integral formulas of the Poisson type, analytic continuation.

637—**Functions of a Complex Variable III.** Three hours. As needed.

Prerequisite: MAT 636.

A continuation of MAT 636 including selected topics from the advanced theory of functions of a complex variable.

641—**Functions of a Real Variable I.** Three hours. As needed.

Prerequisite: MAT 443.

Set theory, relations and equivalences, ordering of sets, real number system, sequences of real numbers, Borel sets, convergence of sequences, Lebesque measure; Riemann and Lebesque differentiation and integration theory.

642—**Functions of a Real Variable II.** Three hours. As needed.

Prerequisite: MAT 641.

Lebesque differentiation and integration theory, classical Banach spaces; functions, homomorphisms, completeness, subspaces, and uniform continuity in metric spaces; bases, separation axioms, product spaces, connectedness in topological spaces.

643—**Functions of a Real Variable III.** Three hours. As needed.

Prerequisite: MAT 642.

Vector spaces, linear manifolds, linear operators, topological vector spaces, weak topologies, convexity, Hilbert space, general measure and integration theory.

651—**Applied Mathematics I.** Three hours. As needed.

The study of vector spaces, linear transformations, matrices, eigenvalues, eigenvectors, diagonalization, spectral decomposition, and cannonical forms.

652—**Applied Mathematics II.** Three hours. As needed.

Prerequisites: MAT 441, MAT 651. Corequisite: MAT 442.

Point sets in Euclidean n-space, sequences, continuity, convergence, integration, integral operator, and expansion theorems.

653—**Applied Mathematics III.** Three hours. As needed.

Prerequisite: MAT 652. Corequisite: MAT 443.

Integral equations, series and special functions.

675—**General Topology II.** Three hours. As needed.

Prerequisite: MAT 475.

A study of properties of topological spaces such as imbedding theorem and extension theorems, metrizability and compactification.

681—**Topics in Algebra.** Three hours. As needed.

Prerequisites: MAT 424 and permission of the instructor.

682—**Topics in Analysis.** Three hours. As needed.

Prerequisite: Permission of instructor.

683—**Topics in Topology and Geometry.** Three hours. As needed.

Prerequisite: Permission of the instructor.

689—**Mathematics Seminar I, II, III.** One hour each. Quarterly.

Prerequisite: Permission of instructor.

691—**Research in Mathematics.** One to nine hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

789—**Mathematics Seminar I, II, III.** One hour each. Quarterly.

Prerequisite: Permission of instructor.

MEDICAL TECHNOLOGY (MTC — 354)

692—**Special Problems in Medical Technology I, II, III, IV.** Two hours each.

Individuals will be assigned some specific clinical problem in medical technology to investigate under faculty direction. Credit will be determined by the quality of work done, varying from two to a maximum of eight hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or doing an internship at an affiliated hospital must enroll in this course.

698—**Thesis.** Six hours.

MICROBIOLOGY (MIC — 310)

501—**Microorganisms in Health and Disease I.** Three hours. Fall, Summer.

Four hours lecture.

Course not designed for majors in the College of Science.

A comprehensive survey of the bacteria, viruses, rickettsiae, chlamydiae, yeasts, molds, protozoa and other human parasites, their relationship to man and his environment.

502—**Microorganisms in Health and Disease II.** Three hours. Winter, Summer.

A continuation of MIC 501.

A study of immunology, serology, and pathogenic microorganisms.

505—**An Introduction to Clinical Instrumentation.** Three hours. Winter, Spring, Summer.

This course is particularly designed for the advanced medical technologists, to familiarize them with instrumental procedures commonly encountered in modern medical technology. Particular emphasis will be placed on spectrophotometry (visible and UV determinations), flame photometry, and fluorescent antibody techniques.

508—**Advanced Microbiology Techniques.** Three hours. Spring, alternate years.

Two hours lecture and four hours laboratory per week.

Prerequisite: MIC 301.

Special emphasis is placed on microbiological techniques beyond the scope of MIC 301.

511—**Pathogenic Microbiology.** Three hours. Fall, Summer.

Two hours lecture and four hours laboratory per week.

Prerequisite: MIC 301.

Schemes for isolation and identification of major groups of disease producing organisms.

512—**Advanced Pathogenic Microbiology.** Three hours. Winter, Summer.

Prerequisite: MIC 511.

Continuation of MIC 511, on an advanced level; schemes for isolation and identification of major groups of disease producing organisms.

521—**Virology and Tissue Culture.** Three hours. Winter, alternate years.

Two hours lecture and four hours laboratory per week.

Prerequisite: MIC 301.

Survey of viruses and viral classification, including viral diseases, involving tissue culture techniques as applied to virology.

541—**Immunology and Serology.** Three hours. Spring.

Two lectures and four hours laboratory per week.

Prerequisite: MIC 512.

Studies of infection, resistance, types of immunity, hypersensitivity and major techniques of diagnostic immunological reactions.

555—**Microbial Physiology.** Three hours. Spring, alternate years.

Four hours lecture per week.

Prerequisites: MIC 301.

Studies of the microorganisms' response to the environment by means of adaptive control mechanisms. Roles of transcription and translation of genetic information, along with replication of DNA considered.

571—**Microbiology of Water and Sewage.** Three hours. Spring, alternate years.

Two hours lecture and four hours laboratory per week.

Prerequisite: MIC 301.

Control of purity water supply; sources and types of pollution and control of sewage disposal.

581—**Soil Microbiology.** Three hours. Fall, alternate years.

Two hours lecture and four hours laboratory per week.

Prerequisite: MIC 301.

Study of soil microflora, emphasis on Nitrogen-Carbon cycle in environment.

691—**Research in Microbiology.** One to nine hours.

692—**Microbiological Problems I, II, III, IV.** Two hours each.

Offered only by special arrangement.

A course in special techniques, designed for majors with a need for certain microbiological techniques as tools for future research.

697—**Independent Study and Research.** One to nine hours.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

731—**Medical Mycology.** Three hours. As needed.

Two hours lecture and four hours laboratory per week.

Prerequisite: Consent of instructor.

Consideration of the fungi of medical significance.

742—**Principles of Immunochemistry.** Three hours. As needed.

Four hours lecture per week.

Prerequisite: MIC 541.

A study of the chemistry of antigens, antibodies and complement and the mechanism of their interaction. Advanced techniques and methods involved in the study of antigen-antibody reactions with emphasis on the quantitative aspects of serological reactions.

743—**Immunohematology.** Three hours. As needed.

Four hours lecture per week.

Prerequisite: MIC 541.

A study of the serology, genetics, and anthropological aspects of human blood groups, isoantigens and antibodies.

751—**Advanced Microbial Physiology.** Three hours. As needed.

Four hours lecture per week.

Concepts of microbial nutrition, metabolism, adaptation and genetics as related to growth and environment.

761—**Industrial Microbiology.** Three hours. As needed.

An intensive study of yeasts, molds, and bacteria as they are applied in the production of amino acids, vitamins, steroids, enzymes, and organic acids and alcohols.

762—**Industrial Microbiology.** Three hours. As needed.

Continuation of MIC 761.

789—**Microbiology Seminar I, II, III.** One hour each. As needed.

The presentation and defense of current, classical concepts and principles of microbiology.

791—**Research in Microbiology.** One to nine hours.

792—**Special Problems.** Three hours.

797—**Independent Study and Research.** One to nine hours.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

898—**Dissertation.**

MUSIC (MUS — 675)

520—**Musical Acoustics.** Three hours. Spring 1973-74, and alternate years.

An investigation into the nature and perception of musical sounds designed to lead to a better understanding of problems of tone production, intonation, and allied musical aspects.

531—**History of Opera.** Three hours. Winter 1973-74, and alternate years.

The history of musical theatre from Greek drama to present. Open to non-music majors with consent of instructor.

532—**American Music.** Three hours. Summer 1973-74, and alternate years.

A study of the development of music in North America with particular emphasis in three areas: (1) European heritage, (2) jazz, (3) composers of the twentieth century whose idioms evidence strong roots in American culture. Open to non-music majors with consent of instructor.

533—**20th Century Music.** Three hours. Winter 1973-74, and alternate years.

Examination of music trends since Debussy and Mahler. Open to non-music majors with consent of instructor.

534—**Ancient, Medieval and Renaissance Music.** Three hours. Spring 1973-74, and alternate years.

A study of the rise of music in the ancient world, the beginning of western music and of polyphony with particular attention to the music of the Burgundians through Gesualdo.

535—**Baroque Music.** Three hours. Summer 1974-75, and alternate years.

The development of musical styles and forms from Monteverdi through J.S. Bach.

536—**18th Century Music.** Three hours. Summer 1973-74, and alternate years.

The development of classical styles and forms, with particular emphasis on style galant, the Mannheim school, Empfindsamer Stil, and the Viennese classicists.

537—**19th Century Music.** Three hours. Fall 1973-74, and alternate years.

The development of musical romanticism, with emphasis on the transformation and expansion of classical forms and the appearance of new formal and stylistic concepts.

540-541—**Vocal Literature.** Two hours each. As needed.

542-543—**Piano Literature.** Two hours each. As needed.

544-545—**Organ Literature.** Two hours each. As needed.

546-547—**Instrumental Literature.** Two hours each. As needed.

548-549—**Choral Literature.** Two hours each. As needed.

A survey of accompanied and unaccompanied choral music from Gregorian chant to the present. Open to non-music majors with consent of instructor.

550—**Symphonic Literature.** Three hours. Summer 1974-75, and alternate years.

The history and literature of the symphony orchestra from 1600 to the present. Open to non-music majors with consent of instructor.

551—**Chamber Music.** Three hours. Fall 1973-74, and alternate years.

A survey of music for small instrumental ensembles. Open to non-music majors with consent of instructor.

559—**Church Music Colloquium.** Three hours. Spring.

Philosophies of church music as well as the administration, liturgies, and related materials will be studied.

562—**Hymnology.** Three hours. Winter quarter as needed.

The history of the Christian hymn from its root to present-day forms.

692—**Special Studies I, II, III.** One to three hours each.

Investigation of specialized areas of interest within the broad field of music, with emphasis on individual research. A committee of not less that three graduate faculty is appointed to evaluate the results of each study.

702—**Bibliography for Music Research.** Three hours. Fall, and as needed.

A detailed examination of the basic research materials available to music and music education students. This includes both books and serial publications.

711—**Pedagogy of Theory.** Two hours. Alternate summers.

A course in the teaching of music theory in the senior high school as well as the college level. Special consideration will be given to an approach correlating ear training, analysis, and part-writing.

712—**Seminar in Composition.** Three hours. As needed.

A composition class for non-composition majors.

713—**Seminar in Music Theory.** Two hours. As needed.

For theory and composition majors; open to others with consent of instructor.

714—**Composition in a Large Form.** Four hours. As needed.

Open to students with a major in theory and composition.

715—**Recital.** One to three hours. Quarterly.

At the discretion of the major applied or conducting teacher, each student may be required to pass a pre-recital audition before a committee of the graduate faculty.

720—**Graduate Music Theory.** Two hours. Fall, Summer.

A survey of the materials of music with emphasis on the study of the harmonic system of the 18th and 19th centuries. Credit for this course may not be counted toward a graduate degree.

721-722—**Analytical Techniques.** Two hours each. Fall, Winter, and alternate summers.

A course designed to develop technique in analysis of music from various periods. MUS 721 will cover music from the time of early polyphony through the Baroque period. MUS 722 will cover music in the Classical and Romantic periods.

723—**Seminar in 20th Century Compositional Techniques.** Three hours. Spring.

A seminar in techniques utilized by composers in the 20th century. Emphasis will be placed on analysis of selected works, with some arranging and original compositions involved.

730—**Graduate Music History.** Two hours. Fall, Summer.

A rapid study of music from Gregorian Chant through Penderecki. This course is required of all entering graduate students. The course may be waived subject to an entrance examination in music history to be given at the beginning of each quarter. Not to be counted toward a degree in music or music education.

731—**Seminar in Performance Practices I.** Three hours. Winter, Summer, and as needed.

A study of the conductor's and performer's problems in the interpretation and performance of vocal and instrumental music of the 17th and 18th century.

732—**Seminar in Performance Practices II.** Three hours. Spring, Summer, and as needed.

A study of the conductor's and performer's problems in the interpretation and performance of vocal and instrumental music of the 19th and 20th century.

733—**History of Style in Music.** Three hours. Spring and Summer as needed.

Detailed analysis of selected musical works from antiquity to the 20th

century. Special emphasis is placed upon the identification of style determinants. Doctoral students and conducting majors only.

734—**Notation.** Three hours. As needed.

The forms of musical notation from the Middle Ages to the present day, with particular emphasis on the notation of polyphonic music prior to 1600.

760—**Seminar in History of Church Music.** Three hours. As needed.

Sacred choral literature from the Middle Ages to the present is surveyed. The major forms, such as plainsong, motet, Mass, anthem, oratorio, and cantata, are dealt with in terms of style and performance practice. Organ literature as it applies to the church service is also covered.

761, 762, 763—**Seminar in Music Literature.** Three hours each. Fall, Winter, Spring.

A course designed to expand the student's knowledge of literature through a period, historical, or school approach. The material covered in each semester is flexible with an attempt to meet the needs of the students.

786—**Arranging Music for School Bands.** Two hours. Summer.

This course is designed to provide the arranger with the essential techniques of scoring for the marching and concert band. Emphasis is placed upon playing of the individual assignments.

787—**Arranging for School Choruses.** Two hours. Summer.

Concepts and techniques of scoring for voices, with emphasis on arranging rather than on original composition for choral organizations.

788—**Arranging for School Orchestras.** Two hours. Summer.

To provide arrangers with techniques of scoring for string ensemble and school orchestras.

792—**Special Studies I, II, III.** One to three hours each.

Doctoral students only.

MUSIC EDUCATION (MED — 680)

524—**Instrumental Repair.** Three hours. Fall, Summer.

Topic I—Organ Design and Repair. Fall.

Topic II—Piano Tuning. Summer.

Topic III—String and Wind Instrument Repair. Summer.

580—**Piano Workshop.** Two hours. As needed.

A course designed to meet the needs of the piano teacher, including a survey of standard materials together with a presentation of modern teaching methods. Each year the workshop utilizes the services of a nationally known guest consultant and lecturer. Cannot be applied toward a music degree.

581—**Instrumental Workshop.** Two hours. As needed.

A survey and analysis of problems relating to instrumental music education through lecture, performance, and discussion with nationally recognized authorities in the field of instrumental music education. Cannot be applied toward a music degree.

582—**Choral Workshop.** Two hours. As needed.

An examination, study, and analysis of choral techniques and procedures. A thorough study of literature in chronological order from early classics through modern and new publications. Organized and designed to meet the need of teachers now actively participating in professional work or anticipating entering the profession immediately. Cannot be applied toward a music degree.

583—**Elementary Workshop.** Two hours. As needed.

Intensive examination of current problems, trends, and materials in the field of elementary music education with outstanding guest consultants leading the lecture, discussion, and demonstration session. Cannot be applied toward a music degree.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

No thesis will be accepted unless accompanied by an abstract. Theses which employ questionnaires will not be accepted unless accompanied by summaries of the findings to be mailed to respondents.

710—**Band Literature.** Three hours. Alternate summers.

A study of band literature from its emergence to the present. Emphasis is placed on individual research and preparation of representative literature for performance.

714—**Administration and Supervision of Elementary and Secondary School Music Programs.** Three hours. Summer, and as needed.

The organization, supervision, and evaluation of the total music program, including program development, methods of teaching, problems of finance, and selection of personnel and equipment.

715—**Research Project.** Three hours.

Prerequisite: Approval of the major professor.

725—**Foundations and Principles of Music Education.** Three hours. Fall, Summer.

Historical and philosophical foundations of the total music education program, and principles of teaching, learning, organization, administration, and supervision.

726—**Research in Music Education.** Three hours. Winter, Summer.

Prerequisites: RED 601 or equivalent and MUS 702.

Investigation of the current research and literature in music education; study of writing techniques pertinent to music education research.

727—**Aesthetics.** Three hours. Spring, Summer, as needed.

This course will focus on issues and theoretical positions in aesthetic education and relate these to curriculum concerns in music and related arts. Writings of Susanne Langer, Leonard Meyer, John Dewey, and others will establish the basic philosophical directions for the course. There will be study of the ways in which contemporary curricula might be patterned to include a broader aesthetic foundation.

731, 732—**Graduate Conducting I, II.** Two hours each. Quarterly.

Development of conducting skills, rehearsal techniques, study and preparation of scores of standard band, choral, and orchestral repertoire.

733—**Seminar in Conducting.** Three hours. Spring, Summer.

Techniques of advanced choral and instrumental conducting. Score analysis and problems of preparation and performance. Study of major works and individual projects.

734—**Woodwind Techniques and Materials.** Two hours. Summer, and as needed.

A course dealing with the problems of teaching woodwind instruments and a comprehensive study of woodwind literature.

735—**Brass Techniques and Materials.** Two hours. Summer, and as needed.

A comprehensive survey of teaching techniques for the brasses with a survey of teaching materials emphasizing pedagogy textbooks and books designed for class instruction.

736—**Percussion Techniques and Materials.** Two hours. Summer, and as needed.

Performance techniques of all percussion instruments and a survey of teaching materials and literature for percussion.

737—**String Techniques and Materials.** Two hours. Summer, as needed.

A comprehensive survey of teaching techniques for the stringed instruments; survey of teaching materials emphasizing pedagogy textbooks and method books designed for class and individual instruction.

738—**Keyboard Techniques and Materials.** Two hours. Summer, and as needed.

An examination of keyboard literature as it relates to the techniques and practices of piano instruction.

739—**Vocal Techniques and Materials.** Two hours. Summer, and as needed.

Techniques and procedures for teaching correct vocal production habits to student groups to achieve choral tone quality; "schools" of choral singing; examination of extensive choral literature for secondary school and collegiate choral groups.

740—**Music Education in the Elementary Schools.** Three hours. Summer, and as needed.

An advanced course in the development of music education programs for children. Specific concern will be given to the study of musical characteristics of primary and intermediate grade pupils. Perceptual and conceptual development will be examined, considering both psychological research findings and common sense approaches. The affective development of elementary pupils will be examined. Vocal and manipulative skill development will also be studied. A portion of the course will deal with current teaching methods and music literature for the elementary curriculum.

750—**Music In General Education.** Three hours. Summer, and as needed

An examination of the role of music in the general education of students throughout the educational system.

755—**Psychology of Music.** Three hours. Fall, and as needed.

A course designed particularly for the teacher or prospective teacher of

music. Review of fundamental concepts from the science of psychology. Special study in the areas of auditory preception, motivation, and personality, leading to an understanding of individual differences in musical capacities and concomitant application in teaching.

756—**Evaluation and Guidance in Music Education.** Three hours. Winter, and as needed.

The administration and interpretation of tests of musical talent and musical achievement. Practical application of tests results, inventories and other devices used in the teaching and guidance of music students in public schools, colleges, and universities.

791—**Research in Music Education.** Three hours.

Prerequisite: Approval of the major professor.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis or a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

825—**Doctoral Seminar In Music Education.** Three hours. Winter.

Orientation to doctoral study. Studies in the history and philosophy of music education.

826—**Doctoral Seminar In Music Education.** Three hours. Spring.

Primary focus on advanced research methods, techniques, and procedures appropriate to the doctoral level of music education. Individual projects to develop skill in reporting research.

827—**Teaching Music in Higher Education.** Three hours. Spring.

Problems of teaching music at the college and university level, including curriculum planning, course content, teaching methods and related matters. Individual projects of special interest in teaching and in administration of college and university music programs.

828—**Administration of College and University Music Programs.** Three hours. Summer.

A practical course in the principles of administration, organization, and goals of music programs at the college and university level.

898—**Dissertation.**

PHILOSOPHY (PHI – 284)

551—**Political Philosophy.** Three hours. Spring.

The major schools of political philosophy from classical to contemporary times.

554—**Philosophical Systems.** Three hours. Fall of even years.

A more advanced study of rationalism, empiricism, idealism, existentialism, phenomenology, and analytical philosophy.

556—**The Philosophy of Science.** Three hours. Fall of odd years.

The conditions and status of knowledge, perception, measurement, hypothesis and causality.

557—**Aesthetics.** Three hours. Winter of odd years.

An analysis of theories of art and beauty from Plato to the present.

558—**Symbolic Logic.** Three hours. Fall of even years.

The basic theory and operations of the sentential calculus, quantification and the logic of relations.

620—**Seminar in Metaphysics.** Three hours. As required.

Classical and contemporary metaphysics will be examined. Modern criticism by logicians, analytic philosophers, and philosophers of science will be presented.

625—**Seminar in Modern Philosophy.** Three hours. As required.

A critical investigation of the writings of selected modern and contemporary philosophers.

630—**Seminar in Epistomology.** Three hours. As required.

The problem of knowledge as presented in modern philosophic thought. Topics include the mind-body problem, the neural identity problem, behaviorism, etc.

635—**Ethics.** Three hours. As required.

An advanced study of ethical systems.

636—**Major Philosopher.** Three hours. As required.

An advanced study of the contributions of a selected philosopher.

692—**Special Problems.** One to six hours. As required.

A problem study to be approved by the department chairman.

697—**Independent Study and Research.** As required.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

PHYSICAL EDUCATION (PE — 730)

501—**Corrective, Adaptive, and Developmental Physical Education.** Three hours. Winter.

Recognition of and corrective exercises for functional abnormalities.

570—**Development of Athletic Attributes.** Three hours. Winter, Spring, Summer.

The physiological and psychological aspects of coaching. Off-season programs for developing efficiency of an athlete, strength, and agility drills. A program of weight training, isometric, and circuit training. Player analysis and placement of personnel.

571—**Practice Organization, Scouting, and Communication Techniques.** Three hours. Fall, Spring, Summer.

Daily practice plans. All phases of scouting techniques. Cinematography and instructional resources, materials, techniques, and equipment for coaches.

580—**Techniques of Teaching Rhythms.** Two hours. Winter.

Practical experiences in group instruction in various areas of dance.

691—**Research I, II, III.** Three hours each.

692—**Special Problems.** Three hours.

697—**Independent Study.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

701—**Advanced Physiology of Exercise.** Three hours. Fall, Spring.

A study which affords the student the opportunity to acquire knowledge about the physiological changes which occur during and after physical activity. The physiological changes include: circulatory, respiratory, endocrine, skeletal, muscular, and nervous systematic adjustments.

702—**Physiology of Exercise Laboratory.** Two hours. Fall, Spring.

Use and care of physiology laboratory equipment.

703—**Advanced Kinesiology.** Three hours. Winter, Summer.

The objectives of this course will be to apply the anatomical and physiological principles of kinesiology to the field of physical education. Students in this course will be involved in a practicum enabling each student to study a practical situation and apply the above mentioned principles.

704—**Tests and Measurements in Physical Education.** Three hours. Fall, Spring.

Tests of fitness, skills, and abilities. Administration and interpretation.

705—**Motor Learning.** Three hours. Winter, Summer.

This course is designed to investigate fundamental principles of movement in man. Physical and psychological variables essential to motor learning will be considered.

709—**Age Characteristics of Motor Skills.** Three hours. Winter.

Analysis of activities and relationships to motor development of children in grades kindergarten through sixth.

720—**Problems of Administration in Physical Education.** Three hours. Winter, Summer.

Consideration of problems faced by administrators of physical education, and including such things as staff selection, financial problems, and teacher-student ratio.

722—**Organization and Administration of Intramural and Extramural Activities.** Three hours. Fall, Spring.

Theory and practices in the organization and administration of intramural-extramural activities as they relate to finances, facilities, equipment, programming activities, and personnel.

723—**Principles of Teaching Physical Education.** Three hours. Fall, Spring.

Developing personal skills for graduate students in methods of teaching, employing physiological and kinesiological principles.

742—**Problems of Curriculum in Physical Education.** Three hours. Fall, Spring.

Fundamental principles and bases of curriculum construction, analysis of activity for teaching purposes and program planning.

744—**Foundations and Trends in Health and Physical Education** Three hours. Fall, Spring.

Scientific bases, history, principles, curricula, and professional preparation in health and physical education.

750—**Facilities and Equipment in Physical Education.** Three hours. Winter, Summer.

Planning facilities for physical education, with special consideration given to recommendations of the Athletic Institute, College Physical Education Association.

770—**Administration of Athletics.** Three hours. Fall, Summer.

Special emphasis on problems of the athletic director and coach in organizing and directing the athletic program through all levels of the educational structure.

771—**Special Athletic Problems—Football.** Three hours. Winter, Summer.

772—**Special Athletic Problems—Basketball.** Three hours. Fall, Summer.

773—**Special Athletic Problems—Baseball.** Three hours. Winter, Summer.

774—**Special Athletic Problems—Track.** Three hours. Spring.

775—**Minor Sports.** Two hours. Fall, Spring.

Modern coaching techniques of swimming, golf, tennis, and other sports of interest.

780—**Research Techniques.** Three hours. Winter, Summer.

Discovery and recognition of problems, evaluation of problems and procedures, types and techniques of research.

791—**Research.** One to eight hours.

792—**Special Problems.** Three hours.

796—**Practicum I, II, III.** Two hours each. Quarterly.

Research in special physiological problems.

797—**Independent Study.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

801, 802, 803—**Physiological Effects of Motor Activity I, II, III.** Three hours each. 801, Fall; 802, 803, quarterly.

A graduate course that allows the student to reach an understanding of various physiological effects of activity and to enable him to pursue further any particular interest in this area.

804—**Principles of Design and Construction of Tests in Physical Education.** Three hours. Winter, Summer.

Prerequisites: Proficient background in test and measurement or permission of instructor.

Techniques and procedures in designing and constructing tests in physical education to include the following: (1) Elements to be measured; (2) Criterion establishment; (3) Preliminary selection of methods of measurement; (4) Characteristics of reliability, validity, objectivity, and practicality; (5) Establishment of final battery; (6) Test manual.

840—**Readings in Physical Education.** Three hours. Winter.

Extensive reading and discussion of physical education literature.

898—**Dissertation.**

PHYSICS (PHY – 360)

542—**The Physics of Waves.** Three hours. Spring.

Four lecture hours per week.

Prerequisite: Mechanics.

A treatment of waves in one, two and three dimensions. Transverse waves, waves on a membrane, theory of elasticity, acoustic waves, diffraction, and spectrum analysis of waveforms.

561, 562, 563—**Modern Physics.** Three hours each. Fall, Winter, Spring.

Prerequisites: PHY 362 and Mechanics.

Electromagnetic waves, electron emission, X-radiation, relativity, quantum theory, spectroscopy, wave mechanics, atomic and nuclear structure, and cosmic rays.

564—**Fundamentals of Solid State Physics.** Three hours. Spring.

Three hours lecture and one 3-hour laboratory period per week.

Prerequisite: Permission.

The basic physical processes which occur in solids, with emphasis on semiconductors and metals.

565—**Nuclear Physics.** Three hours. Spring.

Prerequisite: PHY 362.

Nuclear binding forces, chain reaction, criticality, the non-steady state reactor, radiation shielding and detection.

577—**Meteorology.** Three hours. Winter.

Prerequisites: CHE 103 and PHY 103 or equivalent.

General circulation, vertical structure, and principal variables are stressed. The course will include radiation heating, and cooling with gravity-density effect on moisture, as well as large scale motion.

585, 586—**History and Literature of Physics.** Three hours each. Fall, Winter.

A survey of the history of physics from ancient times to 1900, stressing the rise and fall of concepts.

A survey of the influence of the concept of quanta and relativity and the modern laboratory findings which impinge upon these theories.

691—**Research in Physics.** Hours arranged.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours. Credit deferred until thesis is completed.

701, 702, 703—**Theoretical Physics.** Three hours each. Fall, Winter, Spring.

Prerequisite: Permission.

Selected topics of general physics from an advanced point of view. Generally mathematical development of basic physical concepts.

705—**Special Topics in Theoretical or Experimental Physics.** Three hours. Spring, Summer.

Four lecture hours per week.

Prerequisite: Permission.

Subjects which may be studied under this heading depend upon current interest of students and staff. Will ordinarily be in areas for which no formal courses are offered.

710—**Astronomy for Teachers.** Three hours. Spring.

Three lecture hours and one laboratory session per week.

Lectures, demonstrations and discussions covering selected topics in solar-system and stellar astronomy. Emphasis is placed on those concepts pertaining to science teaching in the secondary schools.

750, 751—**Quantum Mechanics I and II.** Three hours each. Winter, Spring, Summer.

Prerequisite: Permission.

The Schroedinger equation, operators and eigenfunctions, spherically symmetric systems, scattering theory, matrix mechanics, angular momentum and spin, perturbation theory and identical particles.

789—**Seminar I, II, III, IV.** One hour each. As needed.

Prerequisite: Consent of the chairman of the department.

This course will be devoted to the study of current literature in physics and may be supplemented by laboratory research. The student will prepare and deliver one or more papers before the department.

POLITICAL SCIENCE (PS – 208)

501—**American Political Process.** Three hours. Fall.

An analysis of the American political system on an advanced level.

502—**Municipal Government.** Three hours. Fall.

504—**The Legislative Process.** Three hours. Spring.

506—**American Political Parties and Pressure Groups.** Three hours. Quarterly.

507—**Mississippi Government.** Three hours. Winter.

508—**The Presidency and Congress.** Three hours. Spring.

A study of the interplay of roles and functions, powers and pressures among the President, the Bureaucracy, and the Congress in shaping the policies and actions of the United States, internal and external.

509—**Southern Politics.** Three hours. Spring, Summer.

An examination of the politics and political culture of the southern states since 1945. The course consists of an analytical, synthesizing, and expository examination of empirical literature.

520—**Political Theory to Locke.** Three hours. Fall.

521—**Political Theory Locke to Present.** Three hours. Spring.

525—**American Political Theory.** Three hours. Winter.

530—**International Politics.** Three hours. Winter, Spring.

531—**International Organization.** Three hours. Spring.

532—**Politics of the Power Bloc.** Three hours. Winter.

An intensive analysis of the pattern of politics resulting from the formation of the two major power blocs and the developing formation of lesser blocs, such as that led by Communist China and the Neutralist bloc, the Common Market bloc, and the Japanese sphere.

534—**Inter-American Politics.** Three hours. Winter.

A study of hemisphere relations, with emphasis on the United States and Latin America, bilaterally and multilaterally.

535—**Soviet Foreign Policy.** Three hours. Fall.

550—**Governments and Politics of Western Europe.** Three hours. Spring.

551—**Soviet Government and Politics.** Three hours. Winter.

552—**British Government and Politics.** Three hours. Fall.

553—**Middle Eastern Governments and Politics.** Three hours. Winter.

554—**Far Eastern Governments and Politics.** Three hours. Winter.

555—**Tropical African Governments and Politics.** Three hours. Fall.

556—**Latin American Governments and Politics.** Three hours. Fall.

558—**Latin American Political Integration and Development.** Three hours. Alternate years beginning 1973-74.

570—**Public Administration.** Three hours. Fall, Winter.

571—**Public Personnel Administration.** Three hours. Alternate years beginning 1973-74.

572—**Organization and Management.** Three hours. Winter.

573—**Policy Formation.** Three hours. Spring.

580—**United States Constitutional Law.** Three hours. Fall, Spring.

581—**The Judicial Process.** Three hours. Fall, Winter.

582—**Comparative Judicial Politics.** Three hours. Spring.

Prerequisite: PS 580 or PS 581.

585—**International Law.** Three hours. Spring.

691—**Research in Political Science.** One to nine hours. Quarterly.

692—**Special Problems.** One to three hours.

The student works individually on a paper in political science under the supervision of a graduate faculty member. Quarterly.

697—**Independent Study and Research.** Hours arranged. Quarterly.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours. Quarterly.

700—**Seminar in U. S. Government.** Three hours. May be taken twice for credit. Fall, Summer.

Prerequisite: Course in American national, state and local government or consent of instructor.

720—**Scope and Methods.** Three hours. Fall.

A survey of the scope of political science and of the tools and methods utilized in the discipline.

721—**Seminar in Political Theory.** Three hours. May be taken twice for credit. Winter.

723—**Communist Ideology.** Three hours. Summer.

A critical study of materials from the basic writings of Communist thinkers: Marx, Lenin, Stalin, and Mao, with attention to modification made from period to period.

730—**Seminar in U. S. Foreign Relations.** Three hours. May be taken twice for credit. Winter.

Prerequisite: Another course in U. S. foreign policy or history of U. S. foreign policy or consent of instructor.

A survey of current United States foreign policies and problems.

731—**Seminar in International Relations.** Three hours. May be taken twice for credit. Spring.

An intensive survey and analysis of the methodology, literature, and substance of the process of trans-state politics.

750—**Seminar in Comparative Government and Politics.** Three hours. May be taken twice for credit. Spring.

Prerequisite: One or more courses in comparative government or consent of the instructor.

A research-type course in which each student will make an intensive study of the political institutions of one country, or of a group of countries having similar governments.

751—**Seminar in Latin America.** Three hours. May be taken twice for credit. Fall, 1973-74.

Prerequisite: Two Latin American political science or history courses at the 500 level or consent of the instructor.

A research-type course in which each student will make an intensive inquiry into a field such as those described in PS 556 or PS 558, or in Latin American nationalism-regionalism-hemisphereism, or in a special project.

770—**Regulatory Commissions.** Three hours. Winter.

A study of the independent regulatory commissions in the context of separation of powers. The analysis will include the policies of the commissions, and the constitutionality of delegation of legislative power.

781—**Seminar in Public Law.** Three hours. May be taken twice for credit. Spring.

Prerequisite: A course in constitutional law or permission of the instructor.

A research course in which the students examine in depth various aspects of the judicial system and its relationship to other elements in the political process.

791—**Research in Political Science.** One to nine hours. Quarterly.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Three hours. Quarterly.

797—**Independent Study and Research.** Hours arranged. Quarterly.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

898—**Dissertation.**

POLYMER SCIENCE (PSC — 370)

540—**Drug Identification.** Three hours. As needed.

Lectures, demonstrations, and discussions will cover all aspects of drug identi-

fication with emphasis on the subjective nature of identification particularly as would be important to a law enforcement officer. This does not count toward a degree in polymer science.

698—**Thesis.** Six hours.

701, 702, 703—**Advanced Polymer Science.** Three hours each. Fall, Winter, Spring sequence.

An in-depth study of polymer forming reactions, their scope and limitation. Relationships between Mn, Mw, polymer structure and conformation to physical properties of polymers.

710—**Characterization of Polymeric Materials.** Three hours. Fall.

A study of techniques employed in the characterization of macromolecules. To include such topics as light scattering, end group analysis, osmometry, polymer fractionation, NMR, I.R., U.V., and visible spectroscopy, thermoanalytical evaluation and mass spectrometry.

711, 712—**Advanced Physical Polymer Science I, II.** Three hours each. Winter, Spring sequence.

A study of polymer chain conformation, macromolecular solutions, molecular weight distribution, morphology, rheology, structure-property relationships, and kinetics of addition, condensation and copolymerization.

770, 771—**Organic Coatings.** Three hours each. As needed.

A study of film forming compositions to include such polymers as polyurethanes, polyesters, polyamides, polyimides.

780, 781—**Selected Topics in Polymer Science.** Three hours each. As needed.

To include a survey of such topics as thermally stable polymers, conducting polymers, silicone polymers, electro deposition polymers, radiation curing of polymers and the like.

789—**Polymer Science Seminar.** One to four hours. Fall, Winter, Spring.

791—**Research in Polymer Science.** Hours arranged.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

898—**Dissertation.**

PSYCHOLOGY (PSY – 175)

518—**History and Systems of Psychology.** Three hours. Fall, Spring.

Prerequisite: Permission of the instructor.

Review of the history of psychology and intensive study of current systems of psychology. Primarily for psychology majors as final senior course.

520—**Sensation and Perception.** Three hours. Winter.

Prerequisite: PSY 320.

A survey of sensory and perceptual processes with emphasis on the visual system.

522—**Psychology of Learning.** Three hours. Fall, Spring.

Prerequisite: PSY 320.

A study of the basic problems, theories, concepts, and research in the areas of human and animal learning.

524—**Comparative Psychology.** Three hours. As needed.

Prerequisite: PSY 320.

An introduction to the study of animal behavior with special emphasis on the comparison of psychological processes along the phylogenetic scale.

526—**Physiological Psychology.** Three hours. Fall, Spring, Summer.

Prerequisite: PSY 110.

Relationships between physiological functions, especially those of the nervous system, and psychological functions, including perception, emotion, motivation and learning. Primarily for psychology majors and pre-medical students, and students planning to enter law, social work, teaching, or the ministry.

536—**Abnormal Psychology.** Three hours. Fall, Winter.

Prerequisites: Good background in psychology and permission of the instructor.

Study of the major psychoses, the psychoneuroses, and mental deficiency. Primarily for psychology majors, pre-medical students, and students planning to enter law, social work, teaching, or the ministry.

550—**Social Psychology.** Three hours. Winter, Summer.

Prerequisite: PSY 110.

Psychological factors and influences in group behavior. Study of the individual in group situations, and the influence of the social environment on his behavior and development.

551—**Industrial Psychology.** Three hours. Fall, Spring.

Prerequisite: PSY 110.

Applications of psychological principles and methods to problems of industry emphasizing employee selection and placement, merit rating, accident reduction, training and measurement and improvement of employee morale.

555—**Psychology of Personality.** Three hours. Fall, Winter, Summer.

Prerequisites: PSY 110 and permission of the instructor.

A study of the factors involved in the development of the mature personality, with an analysis of the structure and dynamics of personality; critical review of methods of personality evaluation.

562—**Psychological Measurement.** Three hours. Winter, Summer.

Prerequisites: PSY 110 and 360 or equivalent.

Theory, problems, and techniques of psychological measurement. Group tests of ability, aptitude, interests, and personality are emphasized.

620—**Advanced Experimental Psychology.** Two hours. As needed. May be taken twice for credit.

Critical evaluation of and use of a variety of experimental techniques. Each student conducts an original study.

691—**Research in Psychology.** One to nine hours.

692—**Special Problems I, II, III.** One to three hours.

Intensive study of selected research area or field of professional psychology.

697—**Independent Study and Research.** Three hours.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours. Credit deferred until thesis is completed.

710—**Philosophy of Science.** Three hours. As needed.

A study of scientific methodology, theory construction, and system building in modern psychology.

721—**Research Evaluation in the Behavioral Sciences.** Three hours. Fall.

Seeks to develop skill in evaluating the methodological soundness and usefulness of behavioral science research.

722—**Experimental Design.** Three hours. Spring.

A study of the rationale underlying the selection of appropriate design for experimental work and the analysis and interpretation of results obtained through the use of such designs.

723—**Comparative Psychology.** Three hours. As needed.

An examination of methodology employed in animal research, and results of experimentation in the area of animal behavior.

724—**Physiological Psychology.** Three hours. Winter.

Study of neurophysiological mechanisms in behavior, and related problems.

725—**Motivation.** Three hours. As needed.

Prerequisite: EPY 720 or EPY 721.

A study of the current theories and research in the area of human and animal motivation.

726—**Perception.** Three hours. Fall.

Prerequisite: Permission of the instructor.

The development and nature of human perception and its relation to adaptive behavior.

728—**Advanced Experimental Psychology I, II, III.** Three to nine hours. As needed.

For graduate students who wish to conduct research on individual problems not included in a graduate thesis. Emphasis is placed upon background preparation, design, and analysis of research data. Problems should be of publishable quality.

734—**Principles of Behavior Modification.** Three hours. Winter, Summer.

Prerequisite: Permission of the instructor.

An intensive study of the principles of behavioral change and the evaluation of educational and clinical research in behavior modification. Research projects will be required.

735—**Clinical Psychology.** Three hours. Fall.

Prerequisite: Permission of the instructor.

A survey course intended to acquaint the student with the field of clinical psychology. Emphasis on the use of clinical tests in personality diagnosis, a survey of psychotherapeutic techniques, and the research functions of the clinician.

736—**Pre-Practicum in Clinical Psychology.** One to three hours per quarter with a maximum of fifteen semester hours. Quarterly.

Prerequisites: PSY 738, 787, or 788, and permission of the instructor.

Open only to psychology majors planning to enter the clinical field.

This course is designed to give actual clinical experiences to the beginning graduate student. Administration and interpretation of psychological tests as well as therapeutic work with children and adults.

737—**Administration, Supervision, and Consultation in Psychology.** Three hours. Summer.

Prerequisite: PSY 736 and permission of the instructor Required for clinical doctoral students.

A professional course to provide the student with knowledge of techniques of administration, supervision, and consultation. Emphasis will be placed on the similarities and differences in the three techniques. The primary aim is to broaden the student's abilities to meet the needs of more persons and groups by disseminating his professional knowledge in ways other than only by direct contact with clients.

738—**Introduction to Personality Assessment.** One to three hours. As needed.

Prerequisite: Permission of instructor.

Introduction to the theory and use of various psychological tools, including objectives and projective devices as well as interviewing techniques.

739—**Personality Assessment.** Three hours. Fall.

Prerequisites: PSY 738 and permission of instructor.

A study of the theory and practice in the selection, administration, and interpretation of tests used in assessment of personality. It is recommended that this course be taken in conjunction with PSY 782.

742—**Seminar in Case Studies.** One hour.

Prerequisite: Permission of the instructor.

Presentation of actual case studies for evaluation and discussion by advanced graduate students.

751—**Personnel and Industrial Psychology.** Three hours. Spring.

Intensive study of selected problems in industrial and personnel psychology.

752—**Management Training and Development.** Three hours. As needed.

Study of the principles and procedures of the training and development of management, with emphasis on surveying training needs, applying the principles of learning and motivation in implementing training methods and techniques, and evaluating results of training and development.

755—**Personality.** Three hours. Spring.

Consideration of the major theories of personality, and research on the development and measurement of personality.

762—**Research Methods: Descriptive Statistical Methods.** Three hours. Fall.

Prerequisite: PSY 360 or permission of instructor.

A brief review of measures of central tendency and variability with emphasis upon correlation theory, techniques of calculation and application of correlation methods to tests and research data. Introduction to sampling problems, Pearsons Product Moment Method of Correlation, biserial, point biserial correlations, tetrachoric correlation, contingency correlation, partial and multiple correlation.

763—**Research Methods: Significance Tests and Experimental Designs.** Three hours. Winter.

Prerequisite: PSY 762 or permission of instructor.

A brief review of descriptive statistics and normal curve functions. Study of inference and sampling theory emphasizing parametric and non-parametric tests of significance; critical ratio, t-test, chi square, analysis of variance, problems of experimental design.

764—**Factor Analysis.** Three hours. Summer.

Methods of multivariate analysis, emphasizing methods of factor analysis and cluster analysis.

768—**Advanced Psychological Measurement.** Three hours. As needed.

Prerequisite: PSY 762 (PSY 462 or 562 is recommended.)

An intensive study of the theory and techniques of psychological measurement. Reliability, validity, combining tests into a battery, test construction and scaling are emphasized.

778—**Experimental Child Psychology.** Three hours. Spring.

Prerequisite: PSY 320 or permission of the instructor.

An intensive study and evaluation of theory, methodology, and research in child psychology.

779—**Seminar in Developmental Psychology.** Three hours. May be taken for a total of nine hours. As needed.

Prerequisite: Permission of the instructor.

Consideration of specific contemporary problems and issues in developmental psychology.

780—**Advanced Psychopathology.** Three hours. Winter.

Prerequisites: PSY 436, PSY 755, and permission of the instructor.

Intensive study of personality dynamics as related to aberrant behavior, with emphasis on current research.

782—**Clinical Psychology Practicum I, II, III.** Three hours each. Fall, Winter, Spring.

Prerequisites: PSY 738, PSY 787, PSY 788, and permission of the instructor. Open only to psychology majors at the doctoral level.

An analysis of the interrelations between behavior disorders and psychodiagnostics with a view to the selection and application of appropriate therapeutic programs within a clinical setting.

784—**Systems of Psychotherapy.** Three hours. As needed.

Prerequisites: PSY 780 and permission of the instructor.

An analysis of the theories and techniques of current systems of psychotherapy.

787—**Individual Psycholgical Testing: Stanford-Binet.** Three hours. Fall, Spring.

Prerequisite: Approval of departmental head or instructor.

To equip psychological workers to administer individual intelligence tests, and to interpret and apply the test results for diagnosing difficulties in scholastic and personality adjustment. Thorough analysis and intensive practice in mental testing is afforded. The Terman-Merrill Revision of the Stanford-Binet is employed.

788—**Individual Psychological Testing: Wechsler Scales.** Three hours. Winter, Summer.

Prerequisite: Approval of department head or instructor.

To equip the psychological worker to administer individual intelligence tests, and to interpret and apply the test results for diagnosing difficulties in scholastic and personality adjustment. Thorough analysis and intensive practice in mental testing is afforded. The Wechsler Scales are employed.

791—**Research in Psychology.** One to nine hours.

Prerequisite: Permission of the instructor.

794—**Seminar in Problems in Contemporary Psychology I, II, and III.** One hour each quarter for three quarters, not to exceed a total of nine hours. Fall, Winter, Spring.

796—**Internship in Clinical Psychology.** Credit arranged.

Prerequisite: Successful completion of clinical psychology practicum and approval of Director of Clinical Psychology Training. Required calendar year of internship in mental health setting approved by the American Psychological Association. Credit may not be applied toward a graduate degree.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with a major professor or making use of the library or other University facilities must enroll in this course.

898—**Dissertation.**

PUBLIC ADDRESS (PA – 216)

500—**Symbolic Function in Persuasion.** Three hours. Spring, alternate years.

503—**Political Campaign Rhetoric.** Three hours. Fall of election year, state and national.

511—**Workshop in Directing the Secondary School Forensics Program.** Three hours. Summer, as needed.

512—**Workshop in Coaching Debate and Platform Events in the Secondary School.** Three hours. Summer, as needed.

650—**History and Criticism of American Public Address.** Three hours. Summer, alternate years.

RADIO-TELEVISION-FILM (RTF – 220)

516—**Radio Station Management.** Three hours. Fall, alternate years.

525—**Audience Analysis.** Three hours. Spring.

547—**Television Production Workshop.** Two hours. Spring.

560—**Issues in Broadcasting.** Three hours. Fall, alternate years.

577—**Advanced Film Production Workshop.** Two hours. Spring.

692—**Special Problems in Radio and Television.** Three hours.

RECREATION (REC – 735)

513–**Organization and Administration of Public Recreation.** Three hours. Fall, Winter.

515–**Business Procedures for Parks and Recreation.** Three hours. Winter.

A study of the organization and administration of public recreation agencies.

517–**Park Management and Operation.** Three hours. Fall, Winter.

A study of the theory and current practices involved in the effective management and operation of parks and recreation areas.

519–**Operation and Maintenance of Special Areas and Facilities.** Three hours. Winter.

A study of methods, techniques, and current practices for construction, operating, and maintaining special recreation areas and facilities.

522–**Youth Service Programs and Organization.** Three hours. Fall.

A study of the responsibilities, relationships, organization, administration, and activities of youth-service programs.

524–**Community Center and Playground Programs and Operation.** Three hours. Winter.

A study of the administration, programs, and operation of playgrounds and community centers.

526–**Community-School Recreation.** Three hours. Fall, Spring.

A study of the organization, inter-relationships, and conduct of community-school recreational programs.

532–**Environmental Aspects of Recreation.** Three hours. Winter.

A study of the inter-relationships between recreational resources.

534–**Park Development and Design.** Three hours. Spring.

A study of the theory of park site development and design.

536–**Park and Recreation Planning Methodology.** Three hours. Fall.

A study of the methods, techniques, and procedures for systematic park and recreation planning and plan preparation.

538–**Urban Recreation and Open Spaces.** Three hours. Winter.

A study of all aspects of parks and recreation in the urban community.

541–**Resources Management and Policy.** Three hours. Winter.

A study of management policies, methods, and procedures for natural resource areas having recreational value and use.

543–**Outdoor Education.** Three hours. Spring.

A study of outdoor education, specifically its philosophy, programs, methods, and resources.

547–**Interpretation of Cultural and Natural Resources.** Three hours. Spring.

A study of the techniques of the interpretation of cultural and natural resources for recreational programs and educational purposes.

551–**Therapeutic Recreation Programming.** Three hours. Winter.

A study of the organization, programming, and special conduct of recreational programs and activities in institutions.

552–**Gerontology and Recreation for Later Years.** Three hours. Fall, Spring.

A study of the aging process and the special recreational needs, problems, opportunities, and activities of older people.

691—**Research.** Hours arranged.

692—**Special Problems.** Three hours.

694—**Field Problems.** Hours arranged.

696—**Practicum.** Hours arranged.

697—**Independent Study.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

Selected with approval of the department faculty.

701—**Problems and Emerging Trends in Recreation.** Three hours. Fall.

A study of the problems, emerging trends, and special opportunities related to the field and profession of recreation, with emphasis on analysis, evaluation, and alternative solutions.

702—**Research and Evaluation in Parks and Recreation.** Three hours. Fall.

A theoretical study affording some practical application of the methods, techniques, procedures, standards, criteria, and other requirements related to research and evaluation in the professional field of recreation.

703—**Philosophical Foundations of Recreation.** Three hours. Winter.

A study of prevailing foundational concepts, theories, and professional philosophies, and those which should evolve to guide future professional endeavors and courses of action.

704—**Special Field Studies in Recreation.** Three hours. Spring.

An application of theory to practice involving individual investigation, research, and report on some pertinent and prevailing problem or project proposal related to the field of recreation.

740—**Forest Recreation.** Three hours. Fall.

A course designed to provide the student with a working knowledge of the principles of forest orientated recreation. Forest recreation agencies, state and federal forest recreation areas, multiple use concepts, and inter-agency relationships will be covered.

780—**Field Orientation to Recreation.** Three hours. Winter.

A field investigation and evaluation of outstanding recreational projects, programs, areas, and facilities.

790—**Seminar in Recreation.** Two hours. Winter.

A seminar course pertaining to selected professional topics having pertinency and timeliness to the profession of recreation.

791—**Research in Recreation.** One to six hours.

792—**Special Problems.** Three hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

898—**Dissertation.**

RELIGION (REL – 288)

532–**A History of the Christian Church I.** Three hours. Winter.

A study of the history of the church from the apostolic period through the Renaissance.

533–**A History of the Christian Church II.** Three hours. Spring.

A study of the history of the church from the Reformation to the modern era.

535–**Religious Literature and Thought of the Near East.** Three hours. Winter, alternate years.

A study of Judaism, Zoroastrian, and Islamic literature and thought.

537–**Religious Literature and Thought of the Far East.** Three hours. Spring, alternate years.

A study of Hinduism, Buddhism, Taoism, Confucianism, and Shintoism.

SCIENCE EDUCATION (SCE – 380)

553–**Earth and Environmental Science for Intermediate School Teachers.** Three hours. Fall.

Prerequisite: Earth and environmental science background or permission of the instructor.

A course designed to familiarize teachers with the materials, methods, and techniques developed by the earth and environmental science project. Emphasis is placed on laboratory and field work for data collection, and principles of other sciences as they relate to the study of the earth.

554–**Biological Sciences for Intermediate School Teachers.** Three hours. Winter.

A detailed critical examination of the subject matter, techniques, and methods for teaching the life sciences in a locally structured, student-oriented classroom. Micro-teaching is provided to insure a new kind of teaching as required by new kinds of educational materials. This course may be used to fulfill University core requirements.

570–**BSCS–Biology for Secondary Teachers.** Three hours. Spring.

Six hours lecture - laboratory per week.

Prerequisite: Biology background or permission of the instructor.

A detailed critical examination of the subject matter, techniques, and methods for teaching biology in secondary schools as proposed by the Biological Sciences Curriculum Study. Designed to orient teachers in modern biology subject matter and special techniques by presenting background materials and special laboratory exercises. Emphasis is placed on the laboratory as the source of information from which sound conclusions can be drawn.

571–**CHEM–Chemistry for Secondary Teachers–Methods and Techniques.** Three hours. Summer.

Two hours lecture and four hours laboratory work per week.

Prerequisite: Chemistry background or permission of the instructor.

A course designed to familiarize chemistry teachers with the materials,

methods, and techniques of teaching chemistry developed by the Chemical Education Material Study Committee. Unifying principles of chemistry are emphasized, with laboratory work providing the basis of development. Not allowable as credit toward degree requirements for chemistry majors.

572—**PSSC—Physics for Secondary Teachers—Methods and Techniques.** Three hours. As needed.

Two hours lecture and four hours laboratory work per week.

Prerequisite: Physics background or permission of the instructor.

A course designed to familiarize physics teachers with methods, materials, and techniques of teaching physics developed by the Physical Science Study Committee. Not allowable as credit toward degree requirements for physics majors.

698—**Thesis.** Six hours.

700—**Science Curriculum in the Public Schools.** Three hours. Fall.

Prerequisite: Permission of the instructor.

Involves a critical examination of the research, its implications, and trends in science course content. Course will include the use of seminars, research problems, independent study, advanced courses, etc., in the secondary schools.

701—**Problems in Science Teaching.** Three hours. Winter.

Prerequisite: Permission of the instructor.

A study of problems related to curriculum, methodology, activities, professionalism—scientific and educational, and evaluation in science teaching. Involves the examination of recent research in these areas.

702—**Techniques of Demonstrating and Experimenting with Scientific Principles.** Three hours. As needed.

Prerequisite: Permission of the instructor.

A course designed especially for general science teachers, considering fundamental aspects of biology, chemistry, geology, and physics. Provides for examination of modern material, equipment, and apparatus, and the use of the material in demonstrating and experimenting with scientific ideas.

730—**Physics for Elementary School Teachers.** Three hours. Summer.

Prerequisites: 6 hours in physical science and 6 hours in biological science.

The physics course is designed principally for the purpose of providing teachers with a deeper knowledge of matter and energy and understanding of their relationships. This course is organized around principles and general ideas (and their developments) that can be directly applied to the elementary grade. Particular attention is given to quantitative processes pertaining to the understanding of the properties of matter and energy.

731—**Chemistry for Elementary School Teachers.** Three hours. Spring.

Prerequisites: 6 hours in physical science and 6 hours in biological science.

In keeping with the current trends in chemistry teaching, major emphasis in this chemistry course will be placed upon: (1) relating ideas and facts; (2) understanding widely applicable principles; (3) placing heavy reliance upon laboratory work; (4) striving toward closer continuity between subject matter and pedagogy; and (5) deriving the necessary operational and conceptional definitions necessary to think about chemical systems. There will be a shift of emphasis from descriptive chemistry toward chemical principles to represent the

changes in chemistry that have taken place over the last two decades.

732—**Biology for Elementary School Teachers.** Three hours. Fall.

Prerequisites: 6 hours in physical science and 6 hours in biological science.

A course in general modern biology emphasizing the molecular aspects of animate matter.

733—**Earth Sciences for Elementary School Teachers.** Three hours. Winter.

Prerequisites: 6 hours in physical science and 6 hours in biological science.

This course is designed to provide elementary teachers with a general background understanding of natural phenomena of the earth with its relationships in space. Particular emphasis is placed on those processess that are directly applicable to grades 1 through 6.

789—**Seminar.** One hour each quarter for no more than three quarters. Quarterly.

Meets for two hours weekly.

Discussion of current trends and practices in science education; invited speakers; and discussions of prospecti and research of current studies in science education.

791—**Research in Science Education.** One to nine hours.

797—**Independent Study and Research.** One to nine hours.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a research problem or a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

898—**Dissertation.**

SECONDARY EDUCATION (CIS – 120)

570—**Curriculum of the Secondary School.** Two hours. Winter, Summer.

A critical examination of the present day curriculum with emphasis upon the core curriculum.

572—**Student Activities in Secondary Schools.** One hours. Winter, Summer.

Consideration is given to the general nature and organization of the program popularly known as extra-curricular activities. Major emphasis is upon the various activities that constitute an activity program in a modern high school.

692—**Special Problems I, II, III.** One hour each.

694—**Field Problems.** Three hours. As needed.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours. Credit deferred until thesis is completed.

700—**Seminar in Secondary Education.** Three hours. As needed.

An investigation of the major trends in the disciplinary areas of the curriculum with emphasis upon research findings within each area as related to

how each contributes to the accomplishment of the objectives of the secondary school.

701—**Algebra for Secondary Teachers.** Three hours. Fall.

A consideration of problems peculiar to the teaching of algebra and a review of special algebriac principles.

705—**Professional Subject Matter in Mathematics.** Three hours. As needed.

A study of ways to enrich teaching of high school mathematics by the introduction of elementary topics for college mathematics.

706—**Geometry for Secondary Teachers.** Three hours. As needed.

A consideration of problems peculiar to the teaching of high school geometry and a review of special geometric principles.

707—**Materials in the Teaching of Mathematics.** Three hours. As needed.

A study of materials to be used in the teaching of secondary mathematics as: multi-sensory aids, mathematics clubs, evaluation, and applications.

708—**High School Curriculum.** Three hours. Winter, Summer.

Various designs of the curriculum as they apply to general and specialized education, and a critical evaluation of content of subject matter areas in terms of the needs of youth.

709—**Advanced Professional Subject Matter in Mathematics.** Three hours. As needed.

Prerequisite: CIS 705.

710—**Mathematics for Junior High School Teachers.** Three hours. As needed.

Prerequisite: To be teaching junior high school mathematics or have at least a minor in college mathematics.

A consideration of problems peculiar to the teaching of mathematics in grades 7, 8, and 9, and the organization of mathematical subject matter for these grades.

723—**Research and Problems in Mathematics Education.** Three hours. As needed.

A seminar for experienced teachers who wish to plan developmental programs of instruction in light of recent investigation and research. Topics to be considered include teaching strategies, language and symbolism, programmed instruction, current research in mathematics education, and other topics of general interest.

750—**Advanced Study of Problems and Issues in Teaching Secondary School Social Studies.** Three hours. Summer.

Explores inquiry strategies for the social studies classroom and seeks to foster a firm understanding of basic analytical concepts and principles for the experienced social studies teacher.

754—**Reading in the Secondary Schools.** Three hours. Spring, Summer.

A course providing for extensive study of recent trends in materials and methods in reading in secondary school including significant research studies which relate to these.

791—**Research in Secondary Education.** One to nine hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Three hours.

794—**Field Problems.** Three hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a research problem or a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Research Problem.** Three hours. (For Specialist's Degree)

898—**Dissertation.**

SOCIOLOGY (SOC – 292)

520—**Industrial Sociology.** Three hours. Spring.

An advanced sociological study of industrial and business units as social systems in their institutional setting.

524—**Gerontology.** Three hours. Winter.

Sociology of aging.

526—**Sociology of Education.** Three hours. Summer.

540—**Social Control and Collective Behavior.** Three hours. Winter.

A study of principles and techniques by which conformity to the laws and other norms of social units is produced and maintained. Additional emphasis is placed on collective efforts to escape from or redefine social forms.

544—**Juvenile Delinquency.** Three hours. Fall, Spring.

A study of causes and the nature of juvenile delinquency, the development of the juvenile court, of probation and other rehabilitative programs.

550—**Social Foundations of Personality.** Three hours. Winter, Summer.

A comprehensive treatment of the role of the social group and the cultural heritage in the development and functioning of human personality.

560—**Methods of Social Research.** Three hours. Fall, Spring.

A survey of the basic techniques and methods essential to locating, processing, and presenting research materials.

561—**Population.** Three hours. Winter.

A course in population analysis. An introduction to the science of demography. Instruction is given in how to compute and interpret vital data. Special attention is given to Mississippi population data.

571—**Social Institutions.** Three hours. Spring.

A detailed study of major American social institutions; their functions, interrelationships, and significant trends.

580—**Advanced General Sociology.** Three hours. Fall, Spring.

An advanced course in general sociology giving expanded treatment to the basic sociological concepts and subject matter areas. A basic course in a graduate program.

581—**History of Social Thought.** Three hours. Fall.

An introduction to social theory. A survey of men and ideas that have influenced the development of Western civilization.

582—**Sociological Theory.** Three hours. Fall, Spring.

A survey of the growth and development of sociological theory from Comte to the present.

Courses Exclusively for Graduate Students

680—**Departmental Seminar.** One hour. May be repeated once for a total of two semester hours. Quarterly.

Required of all graduate students.

692—**Special Study Projects in Sociology.** One to six hours.

Special projects in reading, survey, or research in sociology. Work will be under direction of the major professor or a member of the graduate faculty. Work will be designed to earn credit in one to six hour units. Maximum credit is six hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

Credit will not be recorded in 698 until thesis is accepted by the major professor.

720—**American Community Life.** Three hours. Fall.

A study of American community life and its social and cultural patterns.

740—**Social Control and Social Change.** Three hours. Fall.

A study of the forms of social control. Independent research projects are reported to the class for discussion and evaluation.

770—**Seminar in Sociological Theory.** Three hours. Winter.

A detailed study of the content and influence of selected major contributors to sociological theory.

771—**Social Institutions.** Three hours. Winter.

An advanced course in social institutions. A study of the structure and function of the five basic institutions. Each student will select one institution for intensive study.

777—**Seminar In Demography.** Three hours. Summer.

Designed to develop understanding of data and trends in world and national population and to provide basis for assessing demographic implications of social and scientific change.

792—**Special Study Projects in Sociology.** One to six hours. (Above the master's level.)

Special projects in reading, survey, or research in sociology. Work will be under direction of the major professor or a member of the graduate faculty. Work will be designed to earn credit in one to six hour units. Maximum credit is six hours.

SPECIAL EDUCATION (SPE — 190)

500—**The Psychology and Education of the Exceptional Child.** Three hours. Quarterly.

Considers the psychological and educational needs of children in atypical

groups; physically, visually, or auditorally handicapped; defective speech, mentally retarded, emotionally disturbed, socially maladjusted, learning disabled, and the gifted.

503—**Educational Evaluation of Exceptional Children.** Three hours. Fall, Spring, Summer.

Prerequisite: PSY 201.

Basic principles underlying measurement and evaluation in education with emphasis on interpretation as it relates to exceptional children.

511—**Speech and Hearing Problems for the Classroom Teacher.** Three hours. Winter, Summer.

This course is designed to familiarize the public school classroom teacher and the education major with speech and hearing problems often found in the public school classroom.

520—**Physiology and Hygiene of the Eye.** Three hours. Fall.

Identification, function, and care of the eye as it relates to the visually handicapped.

521—**Methods and Materials in Teaching the Visually Handicapped.** Three hours. Winter.

An examination of specific areas of emphasis and modifications in approaches and materials for the visually handicapped.

522—**Braille.** Three hours. Fall.

Introduction to Braille and the Braille system of communication in reading and writing.

523—**Teaching of Braille.** Three hours. Winter.

An introduction to the teaching and processes involved in student uses of the Braille system.

524—**Special Adjustments for Visually Handicapped.** Three hours. Spring.

An introduction to mobility training and orientation to movement for the visually handicapped.

525—**Education and Psychology of the Visually Handicapped.** Three hours. Spring.

A consideration of psychological aspects of non-sighted individuals. Developmental areas are emphasized including assessment, educational possibilities, and special areas of concern.

528—**Psychology and Education of the Physically Handicapped.** Three hours. Winter.

A study of major handicapping conditions and their adaptations; social, emotional, and intellectual considerations are included.

529—**Curriculum for the Physically Handicapped.** Three hours. Spring.

A study of educational programs for the physically handicapped.

530—**Learning Disabilities.** Three hours. Quarterly.

A study of the social, emotional, physical, and intellectual characteristics of the perceptually handicapped; methods of diagnosis and differentiation; and special class organization.

532—**Methods and Materials for Teaching Learning Disabilities.** Three hours. As needed.

A study of methods and materials most useful in teaching children with learning disabilities. A variety of media and methods will be emphasized to meet the needs of this exceptionality.

540—**Psychology and Education of the Mentally Retarded.** Three hours. Quarterly.

A study of the social, emotional, physical, and intellectual characteristics of the mentally retarded; methods of diagnosis and differentiation; special class organization.

542—**Methods and Materials for Teaching the Mentally Retarded.** Three hours. As needed.

A study of methods and materials most useful in teaching the mentally handicapped.

590—**Workshop in Special Education.** Three hours. Summer.

Workshop in selected areas of special education.

680—**Advanced Practicum in Special Education.** Three to nine hours. Arranged.

Practicum for master's degree students unique to individual program plans. The practicum will be either in public school, institution, or clinical setting.

691—**Research in Special Education.** One to nine hours.

692—**Special Problems.** One hour.

Examination of medical, sociological, biological, psychological, and institutional aspects of exceptional children.

694—**Field Problems.** Three hours. arranged.

700—**Issues in Special Education.** One hour. Quarterly.

A study of current theories, models, programs, and reports in special education. Open to non-majors.

701—**Problems in Special Education Research Design.** Three hours. Fall, Winter, Spring.

Primary emphasis is placed for graduate degree candidates to develop a prospectus for a field study or dissertation. Study will be made of research procedures in various exceptional areas.

702—**Learning Theories in Special Education.** One hour. Fall.

A seminar course designed to translate theoretical positions to applied approaches for teaching the exceptional child.

709—**Advanced Psycho-Educational Evaluation of the Exceptional Child.** Three hours. Fall, Spring, Summer.

Interpretation and application of measurements for exceptional children with emphasis on curriculum decision making. Open to non-majors.

730—**Issues in Extreme Learning Disabilities.** Three hours. Winter, Summer.

A theoretical and philosophical study of concepts related to neurological factors, dyslexia, and the autistic in learning disorders. Various methodologies are studied.

731—**Advanced Methods in Learning Disabilities.** Three hours. Fall, Summer.

Study of developing individual programs for specific learning disabilities. This course meets certification requirements.

732—**Developmental Learning in Learning Disabilities.** One hour. Fall, alternate summers.

741—**Vocational Education in Mental Retardation.** One hour. Winter, alternate summers.

743—**Advanced Curriculum Studies for the Mentally Retarded.** Three hours. Winter, Summer.

Study of different approaches to curriculum development, with emphasis on basic philosophy and goals of teaching mentally retarded. This course meets certification requirements.

750—**The Psychology and Education of the Emotionally Disturbed.** Three hours. Fall, Summer.

This course explores the characteristics of deviant behavior and its causation; observation of the emotionally disturbed is required.

751—**Problems and Methodologies for the Socially Maladjusted.** Three hours. Winter, Summer.

This course explores educational programs for the disadvantaged, delinquent, migrant, and other socially deviant groups; and the application of specific methods and curricula to such programs.

752—**Basic Curriculum for the Emotionally Disturbed.** Three hours. Spring, Summer.

A course investigating programs, methods, and materials in the education of the emotionally disturbed child; the role of the teacher in relation to a team of specialists; use of resources, records, and reports.

760—**Methods and Materials in Teaching the Gifted.** Three hours. Spring, Summer.

A study of programs, curricula, models, and methodologies for the intellectually advanced.

770—**Administration and Supervision of Program for Exceptional Children.** Three hours. Spring, Summer.

This course is designed for public school administrators and supervisors of programs for exceptional children. It will provide information concerning the organization and administration of programs for exceptional children including the availability of resources and resource personnel for these programs for the school and the community.

791—**Research in Special Education.** One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Three hours.

794—**Field Problems in the Administration of Special Education.** One to six hours credit. As needed.

Students participate in the activities of an organization involved in administering or teaching special education. This may be the state or local level, and the student gains supervised experience in an organized program.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a research problem or a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Research Problem.**

840—**Advanced Studies in Mental Retardation.** Three hours. As needed.

Problems of diagnosis and treatment; a critical review of the literature; designing and conducting research on exceptional children are considered. Investigation of current research, curricula design, and social emotional parameters are considered.

880—**Practicum in Case Work and Guidance for the Exceptional Child.** Two to eight hours. As needed.

Individual cases are tested by students and all available information is integrated for diagnostic and educational purposes.

898—**Dissertation.**

SPEECH AND HEARING SCIENCES (SHS – 296)

501—**Language Development.** Three hours. Fall, Winter.

502—**Anatomy and Physiology of the Hearing Mechanism.** Three hours. Fall.

503—**Anatomy and Physiology of the Speech Mechanism.** Three hours. Winter.

514—**Stuttering and Related Problems.** Three hours. Fall, Spring.

Prerequisite: SHS 301 or equivalent.

515—**Speech and Language Disorders of the Cerebral Palsied.** Three hours. Winter.

Prerequisite: SHS 211, SHS 403, or equivalents.

516—**Adult Aphasia and Related Problems.** Three hours. Spring.

Prerequisite: SHS 211, SHS 403, or equivalents.

517—**Speech and Language Disorders Related to Cleft Palate.** Three hours. Summer.

Prerequisite: SHS 211, SHS 403, or equivalents.

521—**Aural Rehabilitation.** Three hours. Fall, Winter.

Prerequisite: SHS 221 or equivalent.

531—**Language Disorders I: Assessment of Children with Language Disorders.** Three hours. Fall, Winter.

532—**Language Disorders II: Habilitation of the Aphasic Child.** Three hours. Winter, Spring.

Prerequisites: SHS 201, SHS 431.

533—**Language for Deaf and Other Language-Impaired Children I.** Three hours. Fall, Spring.

534—**Language for Deaf and Other Language-Impaired Children II.** Three hours. Winter.

Prerequisite: SHS 433.

535—**Speech for the Hard-of-Hearing and Deaf.** Three hours. Spring.

Prerequisite: SHS 201.

536—**Problems in Reading and Related Subjects for the Hard-of-Hearing and Deaf.** Three hours. Summer.

Prerequisite: SHS 433 or consent of the instructor.

537—**History, Education, and Guidance for the Deaf.** Two hours. Fall.

538—**Problems in Academic Subjects for the Hard-of-Hearing and Deaf.** Three hours. Winter.

Prerequisite: SHS 433, SHS 434, SHS 436.

539—**Pre-School Hard-of-Hearing and Deaf.** Three hours. Fall, Spring.

Prerequisite: SHS 221 or equivalent.

Practicum required.

601—**Designs in Research for Speech and Hearing.** Three hours. Fall.

602—**Current Topics in Speech Pathology.** Three hours. Fall.

611—**Diagnostic Procedures in Speech Pathology II.** Three hours. Summer.

Prerequisite: SHS 412 or equivalent.

621—**Hearing Aids.** Three hours. Summer.

622—**Clinical Audiology I.** Three hours. Winter.

Prerequisite: SHS 221 or equivalent.

623—**Clinical Audiology II.** Three hours. Spring.

Prerequisite: SHS 221 or equivalent.

A two-course sequence dealing with advanced audiometric techniques and clinical procedures.

624—**Infant Audiometry.** Three hours. Winter.

Prerequisite: Consent of instructor.

A course designed to study the behavior, test procedures, and hearing responses of newborn and young infants.

Practicum required.

625—**Audiological Instrumentation.** Three hours. Spring.

Prerequisite: SHS 221 or equivalent.

626—**Pathologies of the Hearing Mechanisms.** Three hours. Winter.

Prerequisite: SHS 221, SHS 402, or equivalents.

641—**Medical Diagnosis and Treatment of Speech and Hearing Pathologies.** One to four hours. Quarterly.

Prerequisite: Consent of instructor.

692—**Special Problems.** Credit arranged. Six hours maximum.

696—**Practicum in Speech and Hearing Science, Audiology, Language Disorders, or Speech Pathology.** Credit arranged.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis.** Six hours.

701—**Seminar in Psychoacoustics.** Three hours. As needed.

702—**Seminar in Quantitative Methods in Speech and Hearing.** Three hours. As needed.

711—**Seminar in Aphasia and Related Disorders.** Three hours. As needed.

712—**Seminar in Articulation Disorders.** Three hours. As needed.

713—**Seminar in Cerebral Palsy.** Three hours. As needed.

714—**Seminar in Cleft Palate.** Three hours. As needed.

715—**Seminar in Clinical Counseling in Speech Pathology.** Three hours. As needed.

716—**Seminar in Stuttering and Related Disorders.** Three hours. As needed.

717—**Seminar in Voice Disorders.** Three hours. As needed.

718—**Seminar is Psychology of the Deaf and Speech Handicapped.** Three hours. As needed.

719—**Seminar in Problems and Procedures in Evaluating Children.** Three hours. As needed.

721—**Seminar in Aural Rehabilitation.** Three hours. As needed.

722—**Seminar in Differential Audiology.** Three hours. As needed.

723—**Seminar in Electrophysiological Audiometry.** Three hours. As needed.

724—**Seminar in Industrial, Military, and Community Hearing Conservation.** Three hours. As needed.

725—**Seminar in Non-Organic Hearing Loss.** Three hours. As needed.

761—**Laboratory in Speech and Hearing Sciences.** One to three hours. As needed.

762—**Laboratory in Audiology.** One to three hours. As needed.

763—**Laboratory in Speech Pathology.** One to three hours. As needed.

764—**Laboratory in Language Disorders.** One to three hours. As needed.

791—**Research in Speech and Hearing Sciences.** One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Three hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

898—**Dissertation.**

THEATRE ARTS (THE – 685)

501—**History and Design of Costumes.** Three hours. Spring:

Prerequisite: Consent of instructor.

Study of historical and contemporary costume designs and their methods of construction for theatrical presentation.

512—**Stage Lighting.** Three hours. Fall.

Prerequisite: Consent of instructor.

Theory and application of general and special lighting, color, instrumentation, and control.

516—**Playwrighting.** Three hours. Spring.

Prerequisite: Consent of instructor.

Study and research in the elements of play structuring.

517—**Advanced Acting.** Three hours. Winter.

Emphasis on presentational styles.

520—**Advanced Directing.** Three hours. Winter.

Prerequisite: THE 320 or equivalent.

527, 528, 529—**Theatre History I, II, III.** Three hours each. Fall, Winter, Spring.

530, 531—**Summer Theatre I, II.** Three hours each. Summer.
Prerequisite: Consent of staff.
Concentrated applied theatre.

535—**Advanced Scene Design.** Three hours. Spring, alternate years.
Prerequisite: THE 306 or consent of instructor.

545—**Advanced Stage Lighting.** Three hours. Spring, alternate years.

558—**Modern Dance Technique and Analysis.** Two hours. As needed.

559—**Musical Theatre Production.** Three hours. As needed.
Prerequisite: One hour of Opera Workshop.
The study of the different forms and styles of Music Theatre with special attention to the various elements of production.

568—**Musical Theatre Dance.** Two hours. Winter.

580—**Directing Children's Theatre.** Three hours. As needed.
Prerequisites: THE 320, THE 420, or consent of instructor.
The techniques of directing, organizing, and administering a children's theatre program.

590—**Theatre Workshop.** Three hours. Summer.
Designed for the non-theatre major (i.e., English, speech, music, etc.,) who is responsible for directing school or community drama activities.

601—**Introduction to Graduate Study in Theatre.** Two hours. Fall.
Seminar in methods and materials of research in theatre; introduction to the bibliography of the field; organization and form of thesis. Initial enrollment in this program must be in this course.

606—**Dramatic Theory and Criticism.** Three hours. Winter.
Examination and evaluation of dramatic theory from antiquity to present.

611—**Seminar: Contemporary Trends in Theatre.** Three hours. As needed.

612—**Seminar in Theatre Production.** Three hours. As needed.
Theory behind newer staging techniques, such as multiple media, andresearch in other advances in staging.

613—**Seminar in Theatre Design and Structure.** Three hours. As needed.
Research in architectural and acoustical design, lighting, seating, color, use and stage requirements.

614—**Seminar in Acting and Directing.** Three hours. As needed.

615—**Seminar in Dance, Opera, and Theatre.** Three hours. As needed.

616—**Seminar in Community and Regional Theatre.** Three hours. As needed.

688—**Practicum in Theatre I, II, III.** Three hours.
Directed independent study and practical application in an area of theatre production. May be taken three times for a total of twelve hours.

691—**Research in Theatre.** One to three hours.

692—**Special Studies I, II, III.** One to three hours each, for a maximum of nine hours.
Investigation into specialized areas of interest within the broad area of theatre.

697—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Thesis in Theatre.** Six hours.

699—**Creative Project.** Eight hours. As needed.

PART SEVEN

THE GRADUATE FACULTY

THE GRADUATE FACULTY

WILLIAM DAVID McCAIN, B.S., M.A., Ph.D., Litt.D. . . . . .President of the University
B.S., Delta State College; M.A., University of Mississippi; Ph.D., Duke University; Litt.D., Mississippi College.

LAWRENCE CHARLES ALBERS, B.G.E., M.A. . . . Assistant Professor of Communication
B.G.E., University of Omaha; M.A., University of Southern California.

JOHN DOUGLAS ALCORN, B.S., M.Ed., Ph.D. . . . . Chairman of Department of Counseling and Guidance and Professor of Counseling and Guidance
B.S., M.Ed., Ph.D., East Texas State University.

PATRICIA KAY McCONNELL AMACKER, B.A., M.F.A.. . . . . Assistant Professor of Theatre Arts and Director of Dance
B.A., Arizona State University; M.F.A., University of Utah.

PAUL DAVID ANDERSEN, B.Mus., M.Mus., Ph.D. . . . . .Associate Professor of Music
B.Mus., Drake University; M.Mus., Syracuse University; Ph.D., Washington University.

BOBBY DEAN ANDERSON, B.S.E., M.Ed., Ed.D. .Assistant Dean of the Graduate School and Professor of Educational Administration and Supervision
B.S.E., Arkansas State College; M.Ed., University of Missouri; Ed.D., University of Tennessee.

HAYWARD GLENN ANDERSON, B.S., M.A., C.P.A. . .Associate Professor of Accounting
B.S., M.A., University of Southern Mississippi; graduate study, University of Alabama.

WILLIAM HILTON ANDERSON, A.B., M.A., Ph.D. . . . . .Associate Professor of English
A.B., Wofford College; M.A., Ph.D., University of South Carolina.

JAY PASCAL ANGLIN, B.A., Ph.D. . . . . Associate Professor of History
B.A., Louisiana State University; Ph.D., University of California at Los Angeles.

BIRTHNEY ARDOIN, B.A., M.A., Ph.D. . . . . Assistant Professor of Communication
B.A., M.A., Louisiana State University; Ph.D., Ohio University.

WILLIAM DAVID ATCHISON, M.D. . . . . Associate Professor of Medical Technology
M.D., Medical College of Georgia.

GARY MICHAEL ATKINSON, A.B., Ph.D. . . . . .Associate Professor of Anthropology, Philosophy, and Religion
A.B., College of Holy Cross; Ph.D., Duke University.

KAREN ODELL AUSTIN, B.A., M.A. . . . . Assistant Professor of Foreign Languages
B.A., Agnes Scott College; M.A., Middlebury College.

WAYNE LOUIS BABIN, B.S., M.S., Ed.D. . . . . Professor of Physical Education
B.S., M.S., Ed.D., University of Southern Mississippi.

HOWARD WILSON BAHR, A.B., Ph.D. . . . . Professor of English
A.B., Oberlin College; graduate study, The Ohio State University, Oberlin College; Ph.D., University of North Carolina.

NANCY LORENE BAKER, B.A., C.S.W., M.S.W. . . . . Associate Professor of Psychology
B.A., Texas College of Arts and Industries; C.S.W., M.S.W., Louisiana State University.

MABEL MAE BALDWIN, B.S. in Ed., M.A. . . . .Associate Professor of Business Education
B.S. in Ed., Central Missouri State College; M.A., University of Iowa; graduate study, Columbia University.

SHELBY EUGENE BARNES, B.A., M.Ed., Ph.D. . . . . Associate Professor of Health
B.A., Southeastern Louisiana College; M.Ed., University of Mississippi; Ph.D., University of Tennessee.

ANGELA OWEN BEDENBAUGH, B.S., Ph.D . . . . . .Research Associate in Chemistry
B.S., University of Texas; Ph.D., University of South Carolina.

EDGAR HUGH BEDENBAUGH, JR., B.A., M.Ed., Ed.D . . . . . .Associate Professor of Educational Administration and Supervision
B.A., M.Ed., Ed.D., University of Florida.

JOHN HOLCOMBE BEDENBAUGH, B.S., M.A., Ph.D. . . . . Chairman of Department of Chemistry and Professor of Chemistry
B.S., Newberry College; M.A., University of North Carolina; Ph.D., University of Texas.

MICHAEL LEE BELL, B.S., M.Ed., Ed.D. . . . . .Assistant Professor of Research and Human Development
B.S., Northeastern State College of Oklahoma; M.Ed., Ed.D., University of Arkansas.

FRANCES ELIZABETH BENNER, B.M., Mus.M., ...Associate Professor of Music
Arthur Jordan Conservatory, Butler University, Soloist Diploma in Piano; Fontainbleau School of Music; B.M., Mus.M. in Voice, Cincinnati College of Music.

DAVID CHAPMAN BERRY, JR., B.S., M.S. . . . . Assistant Professor of English
B.S., Bob Jones University; M.S., Delta State College; doctoral study, University of Tennessee.

HAROLD TYRONE BLACK, B.B.A., M.A., Ph.D. . . . . Associate Professor of Economics
B.B.A., M.A., Texas Technological College; Ph.D., Tulane University.

LILLY ANNELLE BONNER, B.S., M.A., Ed.D. . . . . Chairman of Department of Business Education and Professor of Business Education
B.S., M.A., University of Southern Mississippi; Ed.D., Indiana University.

HERMAN BOROUGHS, B.S., M.Ed., Ed.D. . . . . Coordinator of Graduate Studies in in Education and Psychology and Professor of Guidance
B.S., Texas College of Arts and Industries; M.Ed., Ed.D., University of Missouri.

LAWRENCE LOUIS BOURGEOIS, A.B., M.A., Ph.D. . . . . Professor of Sociology
A.B., Loyola University; M.A., Louisiana State University; Ph.D., Harvard University.

COLEN JESSE BOUTWELL, JR., B.S., M.S., Ed.D. . . . . Associate Professor of Industrial and Technical Education
B.S., M.S., University of Southern Mississippi; Ed.D., University of Missouri.

RICHARD LEE BOWEN, A.B., M.A., Ph.D. . . . . Professor of Geology
A.B., University of North Carolina; M.A., Indiana University, Ph.D., University of Melbourne; Fulbright Scholar to Australia.

RICHARD HUGH BOWER, B.A., M.A., Ph.D. . . . . Associate Professor of History
B.A., M.A., Ph.D., Mississippi State University.

HYLER JEFFERY BRACEY, B.B.A., M.B.A., Ph.D. . . . . Associate Professor of Management
B.B.A., Lamar State College of Technology; M.B.A., Ph.D., Louisiana State University.

LOUIS KOHL BRANDT, B.E., M.A., Ph.D. . . . . Chairman of Department of Finance and General Business and Professor of Finance and General Business
B.E., Wisconsin State College at Whitewater; M.A., Ph.D., University of Wisconsin.

JULIUS CHRISTIAN BRAUN, B.S., Ed.M., Ed.D. . . . . Professor of Educational Administration and Supervision
B.S., Buffalo State Teachers College; Ed.M., University of Buffalo; Ed.D., Columbia University.

JOSEPH BERENGHER BRECHTEL, B.S., M.S. . . . . Assistant Dean of Students and Instructor of Recreation
B.S., M.S., University of Southern Mississippi.

CHARLES RAY BRENT, B.A., M.S., Ph.D. . . . . Director of Institute of Environmental Studies and Professor of Chemistry
B.A., University of Southern Mississippi; M.S., Ph.D., Tulane University.

ROBERT ARTHUR BRENT, A.B., M.A., Ph.D. . . . . Professor of History
A.B., Gettysburg College; M.A., Ph.D., University of Virginia.

BAHNGRELL WALTER BROWN, B.A., M.S., Ph.D. . . . . Professor of Geology
B.A., University of Omaha; M.S., Ph.D., University of Nebraska.

FRED WALDO BROWN, B.S., M.A., Ed.D. . . . . Professor of Science Education
B.S., Georgia Southern College; M.A., University of Alabama; Ed.D., University of Georgia.

IVA DINKINS BROWN, B.S., M.Ed., Ed.D. . . . . Associate Professor of Science Education
B.S., Georgia Southern College; M.Ed., Ed.D., University of Georgia.

MARICE COLLINS BROWN, A.B., M.A., Ph.D. . . Chairman of Department of English and Professor of English
A.B., Mississippi State College for Women; M.A., University of Southern Mississippi; Ph.D., Louisiana State University.

NANCY WORTHINGTON BROWN, B.A., M.A., Ed.D. . . . . Assistant Professor of Special Education
B.A., University of Miami; M.A., East Carolina University; Ed.D., University of Northern Colorado.

WILLIAM GREGORY BRUNDAGE, B.S., M.S., Ph.D. . . Chairman of Department of Medical Technology and Associate Professor of Medical Technology
B.S., M.S., Northwestern State College; Ph.D., Louisiana State University.

BILLY GEORGE BUFKIN, B.S, Ph.D. . . . . Assistant Professor of Polymer Science
B.S., Ph.D., University of Southern Mississippi.

CECIL DWIGHT BURGE, B.S., M.S., Ph.D. . . . . Assistant Professor of Computer Science and Statistics
B.S., M.S., Ph.D., Mississippi State University.

CHARLES DUANE BURGESS, JR., B.S., M.D. . . . . Part-time Associate Professor of Psychology
B.S., Mississippi College; M.D., University of Mississippi Medical School.

ZED HOUSTON BURNS, B.S., M.S., M.A., Ed.D. . . . Professor of Educational Psychology, Natchez.
B.S., in Arch., M.S., Auburn University; M.A., University of Southern Mississippi; Ed.D., University of Cincinnati.

JOHN NEWELL BURRUS, A.B., M.A., Ph.D. . . . . Distinguished University Professor of Sociology
A.B., University of Mississippi; M.A., Ph.D., Louisiana State University.

RAYMOND LEROY BUSBEE, B.S., M.S., Ph.D. . . . Chairman of Department of Recreation and Associate Professor of Recreation
B.S., M.S., Ph.D., University of Georgia.

OTTAMISE COLLEEN WHITTINGTON CAMERON, B.S., M.S., D.B.A. . . . . Associate Professor of Economics
B.S., M.S., University of Southern Mississippi; D.B.A., Indiana University.

CLAUDE LOUIS CAMPBELL, B.S., M.A., Ed.D. . . . . Associate Professor of Curriculum and Instruction
B.S., University of Southern Mississippi; M.A., Ed.D., George Peabody College.

RICHARD EDWARD CAPES, B.S., M.A.E. . . . . Assistant Professor of Art Education
B.S., M.A.E., doctoral study, University of Georgia.

KENNETH LEE CARLSON, B.S., M.S. . . . . Assistant Professor of Health
B.S., M.S., Central Missouri State University.

AUGUST NORBERT CARNOVALE, B.M., M.A. . . Assistant Professor of Music Education
B.M., Louisiana State University; M.A., Columbia University; advanced study, Colorado Western State College, Oklahoma State University.

STANLEY MALCOLM CARPENTER, B.S., M.B.A., C.P.A. . . . . Associate Professor of Accounting
B.S., University of Southern Mississippi; M.B.A., doctoral study, University of Georgia.

WILBUR LLOYD CARR, B.A., M.A., Ph.D. . . . . Chairman of Department of Health and Professor of Health
B.A., M.A., Ph.D., University of North Carolina.

JOSEPH O'HARA CARSON, JR., B.A., M.A., Ph.D. . . . . Professor of Educational Administration and Supervision
B.A., M.A., Tulane University; Ph.D., Florida State University.

DANNY REED CARTER, B.S., M.S. . Acting Chairman of Department of Computer Science and Statistics and Associate Professor of Computer Science and Statistics
B.S., M.S., University of Southern Mississippi; doctoral study, Virginia Polytechnic Institute.

ORLEY BRANDT CAUDILL, B.S., M.A., Ph.D. . . . . Associate Professor of Political Science
B.S., M.A., Ph.D., University of Maryland.

DAVID JAMES CAVENY, B.S., M.A., Ph.D. . . . Chairman of Department of Mathematics and Associate Professor of Mathematics
B.S., Western Carolina College; M.A., Ph.D., University of Kentucky.

DUCHEIN CAZEDESSUS, B.M., M.M., Ed.D. . . . . Associate Professor of Music
B.M., Louisiana State University; M.M., Manhattan School of Music; Ed.D., Teachers College, Columbia University.

ELSIE BOSCHERT CHICHESTER, B.S., M.S. . . . . Assistant Professor of Family Life Services
B.S., Delta State Teachers College; M.S., University of Tennessee.

ORAZIO ANDREA CICCARELLI, B.A., M.A., Ph.D. . . . . Assistant Professor of History
B.A., Francis College; M.A., Ph.D., University of Florida.

JOSEPH HARDIN CLEMENTS, A.B., M.B.A., Ed.D. . . . . Professor of Finance
A.B., University of Kentucky; M.B.A., University of Mississippi; Ed.D., University of Oklahoma.

JOSEPH WILLIAM CLIBURN, B.S., B.A., Ph.D. . . . . Professor of Biology
B.S., Millsaps College; M.A., University of Southern Mississippi; Ph.D., University of Alabama.

ROBERT SAMUEL COOKE, JR., B.S., M.D. . . . . Associate Professor of Medical Technology
B.S., M.D., University of Arkansas.

WILLIE EARL COOLEY, B.S., M.Ed., Ed.D. . . . . Assistant Professor of Research and Human Development
B.S., M.Ed., Ed.D., University of Southern Mississippi.

WALTER ELMORE COOPER, JR., B.S., M.A., Ed.D. . Assistant to the Dean of Education and Psychology and Associate Professor of Research and Human Development
B.S., Huntingdon College; M.A., Ed.D., University of Alabama.

BOBBY EUGENE CRAVEN, B.S., M.Ed., Ed.D. . Associate Professor of Science Education
B.S., Mississippi College; M.Ed., Ed.D., University of Mississippi.

ROBERT THORNTON CREWS, B.S., M.S., M.T. (ASCP) . . . . Education Coordinator and Assistant Professor of Medical Technology
B.S., M.S., Auburn University; M.T. (ASCP), Baylor University Hospital.

GEORGE TRUETT CROOK, JR., B.A., M.A. . . . . Assistant Professor of Theatre Arts and Technical Director and Designer
B.A., M.A., University of California, Davis.

RALPH DONALD CROSS, A.B., M.A., Ph.D. . . . . Associate Professor of Geography
A.B., Eastern Michigan; M.A., University of Oklahoma; Ph.D., Michigan State University.

JAMES OLIN CULBERSON, B.S., M.A., M.Ed., Ed.D. . . . Associate Professor of Guidance
B.S., Bob Jones University; M.A., Columbia Bible College; M.Ed., University of South Carolina; Ed.D., University of Georgia.

ROBERT RAY CUMMINGS, B.B.A., M.B.A., C.P.A. . . . Assistant Professor of Accounting
B.B.A., M.B.A., Memphis State University; doctoral study, University of Mississippi.

DAVID FRANKLIN CUNNINGHAM, B.S.E., M.A., Ed.D. . . . . .Professor of Curriculum and Instruction
B.S.E., Arkansas State Teachers College; M.A., George Peabody College; Ed.D., University of Houston.

EDDIE WAYNE CUPP, B.A., Ph.D. . . . . .Assistant Professor of Biology
B.A., Murray State College; Ph.D., University of Illinois.

JOHN HARBERT DALE, B.S., M.S. . . . . Assistant Professor of Science Education
B.S., Mississippi State University; M.S., University of Southern Mississippi.

JACK LEMORE DANIELS, B.S., M.Ed., Ph.D. . . . . .Professor of Guidance
B.S., University of Texas; M.Ed., Stephen F. Austin State College; Ph.D., East Texas State University.

CHARLES WINFREY DAVIDSON, B.S., M.Ed., Ed.D. . . . . Assistant Professor of Research and Human Development
B.S., Louisiana Polytechnic University; M.Ed., Ed.D., University of Arkansas.

BONNIE JEAN DAVIS, B.S., M.S., Ph.D. . . . . .Professor of Curriculum and Instruction
B.S., M.S., Ph.D., University of Southern Mississippi.

JAMES LOUIS DAVIS, B.S., M.S. . . . . .Associate Professor of Management
B.S., M.S., University of Southern Mississippi; doctoral study, Louisiana State University.

JAMES TREADWELL DAVIS, B.S., M.A., Ph.D. . . . . Professor of History
B.S., Memphis State University; M.A., Ph.D., Vanderbilt University.

JOHN CHESTER DAVIS, III, B.S., M.Ed., Ed.D. . . . . Assistant Professor of Curriculum and Instruction
B.S., M.Ed., Ed.D., East Texas State University.

CHARLES E. DAWSON, B.S. . . . . Assistant Professor of Biology, Gulf Coast Research Laboratory
B.S., University of Miami.

JAMES ESTUS DEAR, B.S., M.B.A., C.P.A., Ph.D. . . . . Professor of Accounting
B.S., Northeast Louisiana State College; M.B.A., Ph.D., Louisiana State University.

CHARLES N. DENNIS, B.A., M.A., Ph.D. . . . . Assistant Professor of Finance
B.A., Southern Methodist University; M.A., Memphis State University; Ph.D., University of Arkansas.

STEPHEN ALAN DOBLIN, B.S., M.A., Ph.D. . . . . Assistant Professor of Mathematics
B.S., M.A., Ph.D., University of Alabama.

JOHN ROBERT DONAHUE, B.M., M.M., Ph.D. . . . . .Associate Professor of Music
B.M., M.M., Louisiana State University; Ph.D., Michigan State University.

JACK POLLARD DONOVAN, B.S., M.Mus., Ph.D. . . . . Associate Professor of Music Education
B.S., M.Mus., University of Nebraska; Ph.D., University of Southern Mississippi.

DONALD EDWARD DORE, JR., B.S., M.D. . . . . Associate Professor of Medical Technology
B.S., M.D., Louisiana State University.

CHRISTOS LEONIDAS DOUMAS, B.A., M.A., Ph.D. . . . . Professor of Political Science
B.A., M.A., Ph.D., University of California at Los Angeles.

LOIS ARENDER DRAIN, B.S., M.S. . . . . Assistant Professor of Home Economics Education
B.S., Northeastern State College; M.S., Oklahoma State University.

NETTIE ETOILE DUBARD, B.S., M.A., Ph.D. . . . . Associate Professor of Speech and Hearing Sciences

B.S., Mary Hardin-Baylor University; M.A., George Peabody College; graduate study, University of Texas, University of Utah, Central Institute of the Deaf at Washington University; Ph.D., University of Southern Mississippi.

EUGENE DANIEL DUKES, B.A., M.A.L.S., M.A., Ph.D. . . . . Assistant Professor of Library Science

B.A., Quincy College; M.A.L.S., University of Michigan; M.A., John Carroll University; Ph.D., Kent University.

ROBERT WINSTON DUNAWAY, B.S., M.Ed. . . . . Assistant Professor of Athletic Administration and Coaching

B.S., Mississippi College, M.Ed., University of Southern Mississippi; doctoral study, University of Indiana.

NANCY CASEY DUNIGAN, A.B., M.M. . . . . Assistant Professor Mathematics

A.B., Greensboro College; M.M., University of Tennessee; doctoral study, Northwestern University.

PETER EASTON DURKEE, A.B., M.A., Ph.D. . . . . Dean of Students and Associate Professor of Counseling and Guidance

A.B., M.A., Colgate University; Ph.D., University of Southern Mississippi.

HENRY BENJAMIN EASTERLING, B.S., M.A., Ed.D. . . . . Professor of Research and Human Development

B.S., University of Southern Mississippi; M.A., University of Alabama; Ed.D., Duke University.

[2] JAMES PAUL ELDRIDGE, B.A., Ph.D. . . . . Assistant Professor of Microbiology

B.A., University of California; Ph.D., University of Oregon.

[4] RUDOLPH DENNIS ELLENDER, JR., B.S., M.S., Ph.D. . . . . Assistant Professor of Microbiology

B.S., M.S., Louisiana State University; Ph.D., Texas A & M University.

THOMAS GLENVALL ESTES, JR., B.S., M.S., Ph.D., C.P.A. . . . . Associate Professor of Accounting

B.S., University of Southern Mississippi; M.S., Oklahoma State University; Ph.D., University of Arkansas.

CEDRIC OLIVER EVANS, B.A., M.A., Ph.D. . . . . Associate Professor of Anthropology, Philosophy, and Religion

B.A., University of Witwatersand; B.A., M.A., University of Oxford; Ph.D., University of Edinburgh.

WALTER KENNEDY EVERETT, B.A., M.A. . . . . Assistant Professor of English

B.A., M.A., Mississippi College; doctoral study, University of North Carolina.

MARY EVELYN McCOMIC FAULKINBERRY, B.S., M.S., Ph.D. . . . . Chairman of the Department of Home Economics Education and Professor of Home Economics Education

B.S., Texas Woman's University; M.S., Colorado State University; Ph.D., Texas Woman's University.

CLAUDE EDWIN FIKE, A.B., A.M., Ph.D. . . . . Dean of the College of Liberal Arts and Professor of History

A.B., Duke University; A.B., Columbia University; Ph.D., University of Illinois.

ARTHUR GEOFFREY FISH, B.S., M.S., Ph.D. . . . . Associate Professor of Biology

B.S., Carleton University; M.S., McGill University; Ph.D., University of British Columbia.

HUBERT VENSON FITCH, B.Mus., M.Mus. . . . . Assistant Professor of Music

B.Mus., M.Mus., University of Michigan; doctoral study, Columbia University.

JAMES LEE FITCH, B.S., M.S., Ph.D. . . . . Assistant Professor of Speech and Hearing Sciences

B.S., Illinois State Normal University; M.S., Ph.D., Florida State University.

GERALD VINCENT FLANNERY, B.A., M.A., Ph.D. . . . . Professor of Communication

B.A., University of Miami; M.A., University of Florida; Ph.D., Ohio University.

TYLER HERRICK FLETCHER, B.A., M.S. . . . . Assistant Professor of Political Science

B.A., University of Texas; M.S., Michigan State University.

JOHN MORGAN FLOWERS, JR., A.B., M.S., M.Ed., Ed.D. . . . . Associate Professor of Science Education

A.B., M.S., University of Alabama; M.Ed., Ed.D., Duke University.

RAYMOND FRANCIS FOLSE, JR., B.S., Ph.D. . . . . Associate Professor of Physics

B.S., Loyola University; Ph.D., Louisiana State University.

DAVID BARON FOLTZ, B.M., M.M., Mus.D. . . . . Chairman of Department of Music and Professor of Music
B.M., M.M., Illinois Wesleyan University; Mus.D., Texas Wesleyan College.

[1]GIOVANNI FONTECCHIO, B.S., M.A. . . . . Assistant Professor of Foreign Languages
B.S., Northern Michigan University; M.A., doctoral study, Louisiana State University.

NICHOLAS HUGH FRUGE, B.A., M.Ed., Ed.D. . . . . Assistant Professor of Research and Human Development
B.A., M.Ed., Ed.D., McNeese State University

GENE BOB FULLER, B.S., M.S., Ph.D. . . . . Assistant Professor of Biology
B.S., Sam Houston State College; M.S., Oklahoma State University; Ph.D., Purdue University.

LARRY JAMES GATES, B.A., M.Ed. . . . . Assistant Professor of Psychology
B.A., Eastern Illinois University; M.Ed., University of Illinois.

ALBERT DONALD GEORGE, A.B., M.A., Ph.D. . . . . Professor of Communication
A.B., M.A., Ph.D., Louisiana State University.

CLYDE NEULAN GINN, B.S., M.Ed., Ed.D. . . . . Assistant Professor of Research and Human Development
B.S., M.Ed., University of Southern Mississippi; Ed.D., McNeese State University.

JAMES WYMAN GLADDEN, JR., B.A., M.S. . . . . Assistant Professor of Geography
B.A., M.S., University of Alabama.

JEWEL GOLDEN, B.S., M.A., Ph.D. . . . . Chairman of Department of Environmental Design and Professor of Environmental Design
B.S., Auburn University; M.A., Columbia University; Ph.D., Florida State University.

JOHN EDMOND GONZALES, B.S., M.A., Ph.D. . . . . The William D. McCain Professor of History
B.S., M.A., Louisiana State University; Ph.D., University of North Carolina.

BILL WES GORE, B.S., M.S. . . . . Acting Associate Dean and Assistant Professor of Mathematics, Natchez
B.S., Mississippi College; M.S., University of Mississippi.

HENRY ARTHUR GOTTLEBER, B.S., M.B.A., Ph.D. . Associate Professor of Management
B.S., University of Southern Mississippi; M.B.A., Boston University; Ph.D., University of Arkansas.

ALBERT EDWARD GOWER, JR., A.B., M.M., Ph.D. . . . . Associate Professor of Music
A.B., Sacramento State College; M.M., University of Oregon; Ph.D., North Texas State University.

WILLIAM TURNER GOWER, B.Mus., M.Mus., M.F.A., Ph.D. . . . . Chairman of Department of Music Education and Professor of Music Education
B.Mus., M.Mus., University of Denver; M.F.A., Ph.D., University of Iowa.

BILLY JOE GRANTHAM, B.S., M.S., Ph.D. . . . . Associate Professor of Biology
B.S., M.S., Ph.D., University of Southern Mississippi.

JOSEPH ARTHUR GREENE, JR., B.A., M.A., Ph.D. . . . . Dean of the School of Business Administration and Professor of Economics
B.A., Berea College; M.A., Ph.D., University of Virginia.

JOHN DAVID WYNNE GUICE, B.A., M.A., Ph.D. . . . . Associate Professor of History
B.A., Yale Universtity; M.A., University of Texas; Ph.D., University of Colorado.

ERIC McCOY GUNN, B.S., M.A., Ed.D. . . . . Dean of College of Education and Psychology and Professor of Research and Human Development
B.S., M.A., University of Southern Mississippi; Ed.D., George Peabody College.

GORDON GUNTER, A.B., M.A., Ph.D. . . . . Professor of Biology
A.B., Northwestern State College of Louisiana; M.A., Ph.D., University of Texas.

KENNETH URIAL GUTSCH, B.M., M.Ed., Ed.D. . . . . Professor of Guidance
B.M., University of Miami; M.Ed., University of Mississippi; Ed.D., Florida State University.

STANFORD PAYNE GWIN, B.S., M.S., Ph.D. . . Chairman of Department of Communication and Associate Professor of Communication
B.S., M.S., University of Southern Mississippi; Ph.D., University of Florida.

GRAHAM LEE HALES, JR., B.A., B.D., Th.D. . . . . Chaplain and Coordinator of Religious Activities and Assistant Professor of Anthropology, Philosophy, and Religion
B.A., Millsaps College; B.D., Th.D., Southern Baptist Seminary.

ARTHUR JOSEPH HALEY, A.B., M.Ed. . . . . Assistant Professor of Recreation
A.B., Stonehill College; M.Ed., Springfield College; doctoral study, Texas A & M University.

JAMES LARRY HALL, B.A., M.A. . . . . Assistant Professor of Communication
B.A., Louisiana College; M.A., Louisiana State University.

ALTRA HOWSE GILL HAMMAN, B.S., M.S., Ph.D. . . . . Chairman of the Department of Family Life Services and Professor of Family Life Services
B.S., University of Southern Mississippi; M.S., University of Tennessee; Ph.D., Texas Woman's College.

KENNETH GERALD HAMPTON, B.S., Ph.D. . . . . Associate Professor of Chemistry
B.S., Wake Forest University; Ph.D., Duke University.

ISKANDAR SALOUM HAMWI, B.A., M.A.S., M.A., Ph.D. . . . . Assistant Professor of Finance
B.A., Damascus University; M.A.S., University of Michigan; M.A., Ph.D., University of Pennsylvania.

JAMES DAVID HAND, B.S., M.A., Ph.D. . . . . Assistant Professor of Research and Human Development
B.S., State University of New York, Cortland; M.S., University of Bridgeport; Ph.D., Michigan State University.

GLENN TERRY HARPER, B.A., M.A., Ph.D. . . . . Associate Professor of History
B.A., Furman University; M.A., Ph.D., Duke University.

GILBERT FREDERICK HARTWIG, Ph.B., M.A., Ph.D. . . . . Professor of Theatre Arts
Ph.B., M.A., Marquette University; Ph.D., University of Wisconsin.

WILLIAM HAMILTON HATCHER, B.A., M.A., Ph.D. . . . . Chairman of Department of Political Science, Director of George Robert Olliphant University Honors Program, and Professor of Political Science
B.S., M.A., University of Arkansas; Ph.D., Duke University.

FRED MARTIN HAWKRIDGE, JR., B.S., Ph.D. . . . . Assistant Professor of Chemistry
B.S., University of Georgia; Ph.D., University of Kentucky.

JERRY THOMAS HAYNIE, B.M., M.M., Ph.D. . . . . Assistant Professor of Music Education
B.M., Union University; M.M., Ph.D., George Peabody College for Teachers.

PHYLLIS ANN HEAVERN, B.S., M.S., Ph.D. . . . . Assistant Professor of Physical Education
B.S., M.S., University of Indiana; Ph.D., University of Iowa.

LEE KEMERLY HILDMAN, B.S., M.S. . . . . Assistant Professor of Psychology
B.S., M.S., Florida State University; doctoral study, University of Florida.

ROBERT BYRON HILL, B.A., M.F.A. . . . . Assistant Professor of Theatre Arts
B.A., Catawba College; M.F.A., Southern Methodist University.

ROGER HARVEY HILL, B.M., M.M. . . . . Assistant Professor of Music
B.M., M.M., Indiana University.

VIRGINIA SWANN HILL, B.S., M.B.A., Ph.D. . . . . Assistant Professor of Management
B.S., M.B.A., University of Southern Mississippi; Ph.D., Louisiana State University.

DOROTHY JEAN ROBINSON HJERMSTAD, A.B., M.S. . . . . Assistant Professor of Physical Education
A.B., San Francisco State College; M.S., University of Wisconsin.

JOE EARL HOLLOWAY, B.S., M.Ed., Ed.D . . . . . Associate Dean and Associate Professor of Educational Administration, Gulf Park
B.S., M.Ed, Ph.D., University of Southern Mississippi.

PAUL EDWARD HORN, B.A., M.A., Ph.D. . . . . Associate Professor of Psychology
B.A., M.A., Ph.D., University of Mississippi.

CHARLES MORRIS HOSKIN, B.S., A.M., Ph.D. . . . . Acting Chairman of Department of Geology and Associate Professor of Geology
B.S., Heidelberg College; A.M., Duke University; Ph.D., University of Texas.

CARL BLAIR HOUSLEY, B.S., Ph.D. . . . . Assistant Professor of Economics
B.S., East Tennessee State University; Ph.D., Florida State University.

[4] PATRICIA NELL HOWARD, B.S., Ph.D. . . . . Assistant Professor of Biology
B.S., Central Oklahoma State University; Ph.D., University of Texas.

JOHN EMORY HOWELL, B.S.Ed., M.N.S., Ph.D. . . . . Associate Professor of Chemistry
B.S.Ed., Marion College; M.N.S., Arizona State University; Ph.D., University of Iowa.

HAROLD D. HOWSE, B.S., M.S., Ph.D. . . . . Director of the Gulf Park Research Laboratory and Associate Professor of Biology
B.S., M.S., University of Southern Mississippi; Ph.D., Tulane University.

WILLIAM EUGENE HUGHES, B.S., Ph.D. . . . . Chairman of Department of Physics and Astronomy and Professor of Physics and Astronomy
B.S., University of Southern Mississippi; Ph.D., University of Alabama.

ELVIN MAX HUNTER, B.S., M.Ed., Ed.D. . . . . Chairman of Department of Industrial and Technical Education and Professor of Industrial and Technical Education
B.S., M.Ed., Ed.D., University of Missouri.

GEORGE EUGENE IMBRAGULIO, B.M., M.M. . . . . Assistant Professor of Music
B.M., M.M., Michigan State University; summer study: Aspen, Colorado: St. Cecelia Conservatory, Rome, Italy; Florida State University; Michican State University.

BOBBY NEWELL IRBY, B.A., M.S., Ed.D. . . . . Chairman of Department of Science Education and Associate Professor of Science Education
B.A., University of Washington; M.S., Ed.D., University of Mississippi.

HOWARD OLIVER JACKSON, B.S., M.A., C.P.A. . . . . Assistant Dean of School of Business Administration and Associate Professor of Accounting
B.S., M.A., University of Southern Mississippi; graduate study, University of Alabama.

MARY ELLEN LINGO JAMES, B.S.E., M.S.E., Ed.D. . . . . Assistant Professor of Curriculum and Instruction
B.S.E., M.S.E., State College of Arkansas; Ed.D., University of Arkansas.

RAOUL FRANK HOWARD JEROME, B.M., M.M. . . . . Assistant Professor of Music Education
B.M., M.M., North Texas State University.

MARION CLOWER JOHNSON, B.S., M.S. . . . . Chairman of Department of Athletic Administration and Coaching and Associate Professor of Athletic Administration and Coaching
B.S., University of Southern Mississippi; M.S., Louisiana State University; doctoral study, Indiana University.

ROGER BARTON JOHNSON, JR., B.A., A.M., Ph.D. . . . . Chairman of Department of Foreign Languages and Associate Professor of Foreign Languages
B.A., University of Southern Mississippi; A.M., Ph.D., University of Illinois.

LEROY JOHNSTON, B.A., M.S. . . . . Assistant Professor of Music Education
B.A., Kansas State Teachers College; M.S., Juilliard School of Music; doctoral study, University of Southern California.

LEE WAYNE JONES, B.M., M.Ed., Ed.D. . . . . Assistant Professor of Research and Human Development
B.M., M.Ed., Stephen F. Austin University; Ed.D., East Texas State University.

BRYCE DONNELL JORDAN, B.S., M.P.A. . . . . Associate Professor of Finance
B.S., Mississippi State University; M.P.A., Harvard University; doctoral study, University of Alabama.

PHILIP ARTHUR KALISCH, B.S., M.A., Ed.D. . . . . Assistant Professor of Curriculum and Instruction and Assistant Professor of History
B.S., M.A., University of Nebraska; Ed.D., The Pennsylvania State University.

MORRIS RAY KARNES, B.S., M.S., Ph.D. . . . . Professor of Educational Administration and Supervision
B.S., M.S., North Texas State University; Ph.D., University of Missouri.

WALLACE GRANT KAY, B.A., M.A., Ph.D. . . . . Curriculum Director of George Robert Olliphant University Honors Program and Associate Professor of English
B.A., Southern Methodist University; M.A., Ph.D., Emory University.

RICHARD KAZELSKIS, B.S., Ed.D. . . . . Director of Bureau of Research and Educational Programs and Assistant Professor of Research and Human Development
B.S., Ed.D., University of Georgia.

WILLIAM THOMAS KECK, B.M., M.M. . . . . Assistant Professor of Music Education
B.M., Eastman School of Music; M.M., Vandercook College of Music.

NATHAN READ KEITH, JR., B.S., M.S., Ed.D. . . . . Research Associate, Bureau of Institutional Research, and Assistant Professor of Research and Human Development
B.S., M.S., Ed.D., University of Georgia.

ARTHELL KELLEY, B.S., M.A., Ph.D. . . . . Professor of Geography
B.S., University of Southern Mississippi; M.A., University of Missouri; Ph.D., University of Nebraska.

FREDERICK DILL KENAMOND, A.B., M.S., Ph.D., C.P.A. . . . . Professor of Accounting
A.B., Shepherd College; M.S., University of Southern Mississippi; Ph.D., University of Alabama.

ROBERT WILLIAM KING, B.S., M.A., M.S., Ph.D. . . . Associate Professor of Mathematics
B.S., M.A., University of Southern Mississippi; M.S., Ph.D., Florida State University.

ROGER TERRY KING, B.B.A., M.B.A., D.B.A. . . . . Associate Professor of Finance
B.B.A., University of Mississippi; M.B.A., D.B.A., Texas Technological College.

HAROLD VICTOR KNIGHT, B.S., M.S.Ed., Ed.D. . . . . Associate Professor of Research and Human Development
B.S., Louisiana State College; M.S.Ed., Northwestern State College of Louisiana; Ed.D., University of Southern Mississippi.

JOHN CARRINGTON KOEPPEL, B.S., M.A., Ph.D. . . . Associate Professor of Psychology
B.S., M.A., Memphis State University; Ph.D., Oklahoma State University.

ARNOLD JOSEPH KRUBSACK, B.A., Ph.D. . . . . Assistant Professor of Chemistry
B.A., St. Olaf College; Ph.D., Stanford University.

JAMES LARRY LADNER, B.S., M.Ed. . . . . Assistant Professor of Athletic Administration and Coaching
B.S., Louisiana College; M.Ed., University of Southern Mississippi; doctoral study, Indiana University.

DAVID MICHAEL LANDRY, B.A., M.A., Ph.D. . . . . Assistant Professor of Political Science
B.A., Tulane University; M.A., American University; Ph.D., University of Notre Dame.

JAMES GILBERT LANGDON, B.S., M.S., Ed.D. . . . . Registrar and Assistant Professor of Guidance
B.S., Southern State College; M.S., Ed.D., University of Southern Mississippi.

MARVIN LEE LANMON, JR., B.S., M.Ed., Ed.D . . . . . Assistant Professor of Industrial and Technical Education
B.S., M.Ed., Ed.D., East Texas State College.

JAMES WILLIAM LARSON, JR., B.S., M.S., Ed.D. . . . . Chairman of Department of Physical Education and Professor of Physical Education
B.S., M.S., Ed.D., University of Southern Mississippi.

ALICE ELIZABETH LASATER, B.A., M.A., Ph.D. . . . . Assistant Professor of English
B.A., Morehead State University; M.A., Ph.D., University of Tennessee.

SHARON ELAINE LEBSACK, B.A., B.M., M.A. . . . Assistant Professor of Music Education
B.A., B.M., M.A., Colorado State College.

BARBARA GAIL LEE, B.A., M.A., Ph.D. . . . . Assistant Professor of Foreign Languages
B.A., M.A., Ph.D., Florida State University.

BILLY EUGENE LEE, B.S., M.Ed., Ed.D. . . . . Assistant Professor or Research and Human Development
B.S., M.Ed., Mississippi State University; Ed.D., University of Mississippi.

TERRY MILTON LEE, B.S, M.S. . . . . Assistant Professor of Recreation
B.S., Henderson State College; M.S., University of Arkansas; doctoral study, University of Georgia.

REX LEE LEONARD, B.S., M.S., Ph.D. . . . . Assistant Professor of Research and Human Development
B.S., United States Naval Academy; M.S., Texas A & I University; Ph.D., University of Northern Colorado.

CAROLYN McKEE LEWIS, B.S., M.S. . . . . Assistant Professor of Business Education
B.S., M.S., University of Southern Mississippi; doctoral study, University of Houston.

CHEN-TUAN LI, B.A., M.A., Ph.D. . . . . Associate Professor of Economics
B.A., National Chingchi University; M.A., Ph.D., University of Florida.

WALTER JAMES LOK, B.Des., M.Des., Ph.D. . . . . Chairman of Department of Art and Professor of Art
B.Des., M.Des., University of Michigan; Ph.D., University of Alabama.

JAMES DOUGLAS LOWE, JR., B.S., M.A., Ph.D. . . . . Professor of Psychology
B.S., M.A., Ph.D., University of Alabama.

DOUGLAS CLAYTON McCAIN, B.S., Ph.D. . . . . Assistant Professor of Chemistry
B.S., Purdue University; Ph.D., University of California, Berkeley.

MARY MARGARET McCARTHY, B.S., M.A., Ph.D. . . . Chairman of Department of Food and Nutrition and Professor of Food and Nutrition
B.S., M.A., University of Southern Mississippi; Ph.D., Louisiana State University.

JESSE FRANKLIN McCARTNEY, B.S., M.A., Ph.D. . . . . Associate Professor of English
B.S., Oklahoma State University; M.A., Ph.D., University of Arkansas.

KENNETH GRAHAM McCARTY, JR., B.S., M.A., Ph.D. . . Associate Professor of History
B.S., M.A., University of Southern Mississippi; Ph.D., Duke University.

CLARENCE EDWARD McCARVER, A.B., B.S., M.A., Ed.D. . . . Coordinator of Graduate Studies and Professor of Health
A.B., Howard Payne College; B.S., M.A., George Washington University; Ed.D., University of Texas.

HARRY WELLS McCRAW, B.S., M.A., Ph.D. . . . . Assistant Professor of English
B.S., Massachusetts Institute of Technology; M.A., Ph.D., Tulane University.

MAX HAROLD McDANIEL, B.A., M.A., Ph.D. . . . . Associate Professor of Psychology
B.A., Millsaps College; M.A., University of Mississippi; Ph.D., Purdue University.

JESSE OSCAR McKEE, B.S. in Ed., M.A., Ph.D. . . . . Assistant Professor of Geography
B.S. in Ed., Clarion State College; M.A., Ph.D., Michigan State University.

NEIL RAYMOND McMILLEN, B.A., M.A., Ph.D. . . . . Associate Professor of History
B.A., M.A., University of Southern Mississippi; Ph.D., Vanderbilt University.

GEORGE HAAS McNINCH, B.S., M.Ed., Ed.D. . . . . Director of Developmental Reading Center and Associate Professor of Curriculum and Instruction
B.S., University of Southern Mississippi; M.Ed., University of Mississippi; Ed.D., University of Georgia.

JAMES HAROLD McPHAIL, B.S., M.Ed., Ed.D. . . Chairman of Department of Educational Administration and Supervision and Professor of Educational Administration
B.S., M.Ed., University of Southern Mississippi; Ed.D., Boston University.

JAMES MERWYN McQUISTON, JR., B.S. . . . . Assistant Professor of Economics
B.S., University of Southern Mississippi; doctoral study, University of Virginia.

THEODORE WALTER MADSEN, B.A., M.A. . . . . Assistant Professor of Music Education
B.A., Colorado State College; M.A., University of Iowa.

RAYMOND MANNONI, B.S., B.M., M.M.Ed., Mus. Ed.D. . Dean of the School of Fine Arts and Professor of Music
B.S., Kansas State College; B.M., University of Michigan; M.M.Ed., Northwestern University; Mus. Ed.D., Chicago Musical College; study, U.S. Navy School of Music, University of Chicago, Kansas University.

WINSTON ERNEST MARKWALDER, B.A. . . . . Assistant Professor of Special Education
B.A., Drake University; doctoral study, University of Minnesota.

THOMAS STANLEY MARTIN, B.S., M.Ed., M.D. . . . . Director of Student Health Services and Assistant Professor of Athletic Administration and Coaching
B.S., Mississippi College; M.Ed., University of Southern Mississippi; M.D., University of Mississippi.

ROBERT FINLAY MASON, D.R.S.M., M.M. . . . . Assistant Professor of Music Education
D.R.S.M., Royal Scottish Academy of Music; M.M., University of Southern Mississippi.

JACK GIBSON MATTHEWS, B.S.E., M.S., Ph.D. . . . . Assistant Professor of Science Education
B.S.E., Henderson State College; M.S., University of Arkansas; Ph.D., The Ohio State University.

JAMES WALTER MEADE, JR., B.S., M.A., M.F.A. . . . . Assistant Professor of Art
B.S., M.A., East Tennessee State University; M.F.A., University of Georgia.

WILLIAM THEODORE MEALOR, JR., B.A., M.A. . . . . Assistant Professor of Geography
B.A., University of Florida; M.A., doctoral study, University of Georgia.

LILLIEN ERL MEHEARG, B.A., M.A., Ph.D. . . . . Professor of Psychology
B.A., Millsaps College; M.A., Louisiana State University; Ph.D., University of Southern Mississippi.

ROBERT MESROBIAN, B.F.A., M.F.A. . . . . Assistant Professor of Theatre Arts and Director of Opera Theatre
B.F.A., M.F.A., Boston University College of Music.

JESSE LLOYD MILAM, B.A., M.A., Ed.D. . . . . Professor of Physical Education
B.A., Louisiana Polytechnic Institute; M.A., Ed.D., Columbia University.

MARLENE MARIE MILKENT, B.S., Ph.D. . . . . Assistant Professor of Science Education
B.S., California State College; Ph.D., University of Texas.

LEO REYNOLDS MILLER, B.S.Ed., M.S.Ed., Ed.D. . . . . Professor of Curriculum and Instruction
B.S.Ed., Kansas City, Missouri Teachers College; M.S.Ed., University of Kansas; Ed.D., The Pennsylvania State University.

WALLACE DYETT MILLER, A.B., M.A., Ph.D. . . . . Associate Professor of Curriculum and Instruction
A.B., Southwest Missouri State College; M.A., Northeast Missouri State College; Ph.D., Southern Illinois University.

LOUELLA GILL MILNER, B.S., M.S., Ed.D. . . . . Associate Professor of Home Economics Education
B.S., M.S., Ed.D., University of Southern Mississippi.

GENE HERBERT MOFFAT, B.S., A.M., Ph.D. . . . . Assistant Professor of Psychology
B.S., Allegheny College; A.M., Northern Illinois University; Ph.D., University of South Dakota.

BOBBY DEAN MOORE, B.S., M.Ed., Ed.D. . . . . Assistant Professor of Research and Human Development
B.S., Lamar State College of Technology; M.Ed., North Texas State University; Ed.D., Southwestern State College (Oklahoma).

ROY NEWTON MOORE, B.S., M.B.A., Ph.D. . . . . Assistant Professor of Management
B.S., M.B.A., University of Southern Mississippi; Ph.D., University of Alabama.

CHARLES WICKLIFFE MOORMAN, A.B., M.A., Ph.D. . . . . Dean of the University and Professor of English
A.B., Kenyon College; M.A., Ph.D., Tulane University; Guggenheim Fellow.

JEROLD JOSEPH MORGAN, B.S., M.B.A., Ph.D. . . . . Chairman of Department of Accounting and Professor of Accounting
B.S., University of Southern Mississippi; M.B.A., University of Houston; Ph.D., University of Alabama.

JOSEPH S. MORRELL, B.S., M.S., Ph.D. . . . . Associate Professor of Mathematics
B.S., University of Southwest Louisiana; M.S., Louisiana State University; Ph.D., Florida State University.

REED RICKMAN MOTTLEY, B.A., M.Ed., Ed.D. . . . . Assistant Professor of Curriculum and Instruction
B.A., Catawba College; M.Ed., Ed.D., University of Georgia.

JOE BARRY MULLINS, B.Mus., M.M., Ed.D. . . . . Professor of Music and Director of Bands
B.Mus., Southwestern at Memphis; M.M., George Peabody College; Ed.D., University of Illinois.

JACK DOUGLAS MUNN, B.S., M.A. . . . . Associate Professor of Mathematics
B.S., University of Southern Mississippi; M.A., University of Alabama; graduate study, Oklahoma State University.

DONALD THOMAS MUNSELL, B.M., M.A., Ph.D. . . . . Assistant Professor of Music Education
B.M., University of Miami; M.A., Ph.D., State University of Iowa.

JOHN ALBERT MURLEY, B.A., M.A. . . . . Assistant Professor of Political Science
B.A., University of Dallas; M.A., Claremont Graduate School.

RAY SIGLER MUSGRAVE, B.A., M.A., Ph.D. . . . . Chairman of Department of Psychology and Professor of Psychology
B.A., Bethany College; M.A., Ohio Wesleyan University; Ph.D., Syracuse University.

JOHN FREDERICK NAU, B.D., M.A., Ph.D. . . . . Distinguished University Professor of Anthropology, Philosophy, and Religion
B.D., Concordia Seminary; M.A., Tulane University; Ph.D., University of South Carolina.

HOWARD CARROLL NESBITT, B.A., M.A., Ed.D. . . . . Professor of Recreation
B.A., Washington College; M.A., Ed.D., Columbia University.

EDITHA SCHLANSTEDT NEUMANN, B.A., M.S.W., Ph.D. . . . . Associate Professor of Foreign Languages
B.A., University of Berlin; M.S.W., University of Pittsburg; Ph.D., Tulane University.

KARL NEUMAN, LL.D., M.F.A. . . . . Part-time Professor of Music
LL.D., Prague University; M.F.A., Carnegie Institute of Technology.

CLINTON COLGATE NICHOLS, B.M.Ed., M.M., D.M. . . . . Assistant Professor of Music
B.M.Ed., Oklahoma Baptist University; M.M., New Orleans Baptist Theological Seminary; D.M., Florida State University.

EDWARD NISSAN, B.S., M.A., Ph.D. . . . . Associate Professor of Computer Science and Statistics
B.S., M.A., University of Kentucky; Ph.D., Texas A & M University.

ELEANOR FLINT NOBLE, B.A., M.A., Ph.D. . . . . Assistant Professor of Curriculum and Instruction
B.A., M.A., Ph.D., Arizona State University.

DONALD EARL NORRIS, JR., B.S., M.S., Ph.D. . . . . Assistant Professor of Biology
B.S., Indiana State University; M.S., Ph.D., Tulane University.

JOHN McCALL NORSWORTHY, B.S., M.Ed., Ed.D. . . . . Associate Professor of Special Education
B.S., M.Ed., Mississippi State University; Ed.D., University of Southern Mississippi.

MARIAN ZYGMUNT NOWAKOWSKI . . . . . Assistant Professor of Music
Performance Diploma, Conservatory of Music and Fine Arts, Lwon, Poland.

BOB GILLHAM OLSEN, B.A., M.A., Ed.D. . . . . Assistant Professor of Research and Human Development
B.A., M.A., University of North Carolina; Ed.D., North Carolina State University.

LINWOOD ELDEN ORANGE, A.B., M.A., Ph.D. . . . . Professor of English
A.B., M.A., Ph.D., Duke University.

ROBIN M. OVERSTREET, B.S., M.S., Ph.D. . . . . Assistant Professor of Biology, Gulf Coast Research Laboratory
B.S., University of Oregon; M.S., Ph.D., University of Miami.

DAVID McINTOSH OWEN, B.S., M.D. . . . . Associate Professor of Medical Technology

B.S., M.D., University of Mississippi School of Medicine.

RALPH SEER OWINGS, A.B., M.A., Ed.D. . . . . Professor of Educational Administration and Supervision

A.B., M.A., Wofford College; M.A., Ed.D., Columbia University.

EDWIN PAUL OXFORD, B.S., M.S., Ph.D. . . . . Assistant Professor of Mathematics

B.S., M.S., Louisiana Polytechnic Institute; Ph.D., New Mexico State University.

BARBARA ANN FISCHER PARKER, B.A., M.A., Ph.D. . . . . Assistant Professor of Biology

B.A., University of Missouri; M.A., University of California; Ph.D., St. Louis University.

OSCAR LAWRENCE PAULSON, JR., B.S., M.S., Ph.D. . . . . Associate Professor of Geology

B.S., M.S., Mississippi State University; Ph.D., Louisiana State University.

ROGER PEARSON, B.Sc., M.Sc., Ph.D. . . . . Chairman of Department of Anthropology, Philosophy, and Religion and Associate Professor of Anthropology, Philosophy, and Religion

B.Sc., M.Sc., Ph.D., University of London.

HERSCHEL QUINTON PEDDICORD, JR., B.A., M.Ed., Ed.D. . . . . Assistant Professor of Research and Human Development

B.A., Presbyterian College; M.Ed., University of South Carolina; Ed.D., Duke University.

PAUL WALLACE PEDDICORD, B.A., M.Ed., Ed.D. . . . . Chairman of Department of Curriculum and Instruction and Professor of Curriculum and Instruction

B.A., Furman University; M.Ed., University of Houston; Ed.D., Duke University.

GEORGE FRANCIS PESSONEY, III, B.S., M.A., Ph.D. . . . . Chairman of Department of Biology and Associate Professor of Biology

B.S., M.A., Sam Houston State College; Ph.D., University of Texas.

OLIVER OTTO PHILLIPS, B.S., M.A., Ed.D. . . . . Assistant Professor of Research and Human Development

B.S., M.A., Ed.D., University of Southern Mississippi.

JAMES WESLEY PINSON, B.S., M.S., Ph.D. . . . . Associate Professor of Chemistry

B.S., William Carey College; M.S., Ph.D., University of Mississippi.

WILLIAM VILAS PLUE, B.S., M.Ed., Ed.D . . . . . Chairman of Department of Special Education and Associate Professor of Special Education

B.S., M.Ed., Lewis and Clark College; Ed.D., University of Oregon.

WILLIAM HARVEY POIRIER, B.S., M.A., Ed.S., Ed.D. . . . . Chairman of Department of Art Education and Associate Professor of Art Education

B.S., Eastern Michigan University; M.A., Ed.S., George Peabody College; Ed.D., University of Southern Mississippi.

LLOYD FRANKLIN POSEY, B.S., M.A., Ed.D. . . . . Associate Professor of Curriculum and Instruction

B.S., University of Alabama; M.A., Ed.D., George Peabody College.

GOMER JEFFREY POUND, Mus.B., M.Mus.Ed., Ph.D. in M.Ed. . . . . Dean of the Division of Extension and Public Service and Professor of Music Education

Mus.B., Michigan State University; M.Mus.Ed., Ph.D. in M.Ed., Florida State University.

ERIC RICHARD PRENSHAW, B.M., M.M., D.M.A. . . . . Assistant Dean of Fine Arts and Associate Professor of Music Education

B.M., M.M., Northwestern University; D.M.A., University of Texas.

PEGGY WHITMAN PRENSHAW, B.A., M.A., Ph.D. . . . . Associate Professor of English

B.A., M.A., Mississippi College; Ph.D., University of Texas.

WILLIAM HENRY PRESSER, A.B., Mus.M., Ph.D. . . . . Associate Professor of Music

A.B., Alma College; Mus.M., University of Michigan; Ph.D., University of Rochester.

CHARLES H. PROBST, B.S., M.A., Ed.D. . . . . Counselor and Assistant Professor of Counseling and Guidance

B.S., M.A., University of Southern Mississippi; Ed.D., University of Mississippi.

THOMAS FRANKLIN PUCKETT, B.A., M.S., M.D. . . . . Professor of Medical Technology

B.A., University of California; M.S., University of Colorado; M.D., University of California.

JOHNNY RAY PURVIS, B.A., M.Ed. . . . . Assistant Professor of Research and Human Development

B.A., M.Ed., doctoral study, Northwestern State College of Louisiana.

WALLACE CLARK PYE, B.S., M.S., Ph.D. . . . . Assistant Professor of Mathematics
B.S., M.S., Louisiana State University; Ph.D., Texas Technological University.

ISAAC BLAINE QUARNSTROM, B.S., M.A., Ph.D. . . . . Chairman of Department of Theatre Arts and Associate Professor of Theatre Arts.
B.S., M.A., Brigham Young University; Ph.D., The Ohio State University.

PATRICK ANDREW QUIGLEY, JR., B.A., M.Ed. . . . . Assistant Professor of Pyschology
B.A., Brooklyn College; M.Ed., University of Florida.

OHREN WILLIS RAINS, B.S., M.Ed., Ed.D. . . . . Assistant Professor of Curriculum and Instruction
B.S., Arkansas Agricultural and Mechanical College; M.Ed., Alabama Polytechnic Institute; Ed.D., Oklahoma State University.

DANIEL LEE RANDOLPH, B.S., M.Ed., Ph.D. . . . . Associate Professor of Guidance
B.S., University of West Virginia; M.Ed., Marquette; Ph.D., Florida State University.

RUTH ANN TAYLOR RATCLIFF, B.S., M.A., Ph.D. . . . . Associate Professor of Mathematics
B.S., Mississippi State University; M.A., Ph.D., University of Alabama.

GRAYSON HANKS RAYBORN, B.S., Ph.D. . . . . Assistant Professor of Physics
B.S., Rensselaer; Ph.D., University of Florida.

ROBERT CLYDE RHODES, B.S., M.A., Ph.D. . . . . Chairman of Department of Speech and Hearing Sciences and Associate Professor of Speech and Hearing Sciences
B.S., Colorado State University; M.A., University of Colorado; Ph.D., University of Pittsburgh.

THOMAS JOSEPH RICHARDSON, B.A., M.A. . . . . Assistant Professor of English
B.A., University of Southern Mississippi; M.A., University of Alabama.

LUIS R. RIVAS, B.L.-B.S. . . . . Associate Professor of Biology
B.L.-B.S., Quebec Technical School.

ONIS EUGENE JACK ROBERTS, JR., B.A., M.A., Ph.D. . . . . Associate Professor of Foreign Languages
B.A., M.A., Ph.D., Louisiana State University.

WILLIAM MARVIN ROBERTS, JR., B.A., M.A., Ph.D. . . . . Chairman of Department of Geography and Professor of Geography
B.A., M.A., University of Iowa; Ph.D., University of Washington.

KEN EDWARD ROGERS, B.S., M.S., Ph.D. . . . . Assistant Professor of Biology
B.S., Tennessee Polytechnic Institute; M.S., Auburn University; Ph.D., University of Tennessee.

LOUIS LEROY ROGERS, B.S., M.A., Ed.D. . . . . Director of Office of Student Teaching and Professor of Research and Human Development
B.S., M.A., University of Southern Mississippi; Ed.D., University of Tennessee.

WINFIELD HARRISON ROSE, B.A., M.A. . . . . Assistant Professor of Political Science
B.A., Carson-Newman College; M.A., doctoral study, Duke University.

MARGARET WILSON RYAN, B.S., M.Ed., Ed.D. . . . . Assistant Professor of Art Education
B.A., M.Ed., Florida Atlantic University; Ed.D., Univerisity of Florida.

RICHARD XAVIER SANCHEZ, B.A., M.M. . . . . Assistant Professor of Music
B.A., Tulane University; M.M., doctoral study, Louisiana State University.

AUBREY CECIL SANFORD, B.S. in B.A., M.B.A., Ph.D. . . . . Associate Professor of Management
B.S. in B.A., M.B.A., University of Southern Mississippi; Ph.D., Louisiana State University.

EVALYN VIRGINIA SCAMELL, B.F.A., B.A.E., M.Ed. . . . . Assistant Professor of Art Education
B.F.A., B.A.E., University of Kansas; M.Ed., The Pennsylvania State University; doctoral study, University of Indiana.

WILLIAM KAUFFMAN SCARBOROUGH, A.B., M.A., Ph.D. . . . . Associate Professor of History
A.B., University of North Carolina; M.A., Cornell University; Ph.D., University of North Carolina.

MARY TURPEN SCHAUB, B.A., M.S. . . . . Instructor of Speech and Hearing Science
B.A., M.S., University of Wyoming.

RAYMOND WAYNE SCHEETZ, B.S., M.S., Ph.D. . . . . Assistant Professor of Biology
B.S., Philadelphia College of Pharmacy and Science; M.S., Ph.D., University of Philadelphia.

WILLIAM THEODORE SCHMIDT, B.A., M.A., Ph.D. . . . . Dean of the School of Health, Physical Education, and Recreation and Assistant Professor of Recreation
B.A., M.A., Ph.D., University of Southern Mississippi.

WILLIAM FREDERICK SCHOELL, III, B.S., M.B.A., Ph.D. . . . . Associate Professor of Marketing
B.S., Louisiana State University, New Orleans; M.B.A., Ph.D., University of Arkansas.

HAROLD WALTER SCHULTZ, B.S., M.S. . . . . Assistant Professor of Microbiology
B.S., M.S., doctoral study, University of Mississippi.

BILLY WAYNE SHAFFER, B.S., M.Ed., Ph.D. . . . . Director of Student Counseling and Associate Professor of Counseling and Guidance
B.S., M.Ed., Ph.D., East Texas State University.

JOHN RICHARD SHAFFER, B.S., M.A., Ed.D. . . . . Professor of Media Service Center, Director of Audiovisual Aids, and Professor of Research and Human Development
B.S., Memphis State University; M.A., Teachers' College, Columbia University; Ed.D., Indiana University.

DONALD JOSEPH SHOEMAKER, B.A., M.A., Ph.D. . . . . Assistant Professor of Sociology
B.A., Millsaps; M.A., Ph.D., University of Georgia.

WILLIAM ARNOLD SIRMON, B.S., M.S., D.B.A. . . . . Associate Professor of Finance
B.S., M.S., University of Southern Mississippi; D.B.A., Mississippi State University.

DAVID ALLEN SISEMORE, B.A., M.A., Ph.D. . . . . Associate Professor of Psychology
B.A., M.A., Ph.D., University of Arkansas.

MICHAEL JAY SITZMAN, B.S., M.Ed., Ph.D. . . . . Counselor in Student Counseling and Assistant Professor of Counseling and Guidance
B.S., Pennsylvania State University; M.Ed., Ph.D., University of Florida.

JOHN RAY SKATES, JR., B.B.A., M.A., Ph.D. . . . . Chairman of Department of History and Professor of History
B.B.A., University of Mississippi; M.A., Ph.D., Mississippi State University.

BILLY BORDEN SLAY, B.S., M.S., Ed.D. . . . . Professor of Physical Education
B.S., M.S., University of Southern Mississippi; Ed.D., Louisiana State University.

BYRON COLMAN SMITH, B.S., M.A., Ph.D. . . . . Professor of Biology
B.S., Indiana State University; M.A., DePauw University; Ph.D., University of Georgia.

JACK ALAN SMITH, B.S., M.A., Ph.D. . . . . Administrative Assistant to Dean of University and Professor of English
B.S., Troy State College; M.A., Ph.D., Auburn University.

JOHN LARRY SMITH, B.S., M.D. . . . . Associate Professor of Medical Technology
B.S., University of Oklahoma; M.D., Tulane University School of Medicine.

ROBERT DALTON SMITH, B.A., Ph.D. . . . . Assistant Professor of Political Science
B.A., University of Virginia; Ph.D., Vanderbilt University.

ISADORE LEON SONNIER, A.B., A.M., Ed.D. . . . . Associate Professor of Science Education
A.B., University of Southwestern Louisiana; A.M., Louisiana State University; Ed.D., Colorado State College.

DONALD RAY SOUTH, B.S., M.S., Ph.D. . . . . Chairman of Department of Sociology and Associate Professor of Sociology
B.S., University of Southern Mississippi; M.S., Ph.D., Louisiana State University.

DONALD REXFORD STAMPER, B.A., M.A., Ph.D. . . . . Assistant Professor of English
B.A., Morehead State University; M.A., Ph.D., University of Arkansas.

MARTIN STEGENGA, B.S., M.S., D.B.A. . . . . Chairman of Department of Management and Professor of Management
B.S., M.S., Mississippi State University; D.B.A., Indiana University.

ROBERT ELLIS STEVENS, B.S., M.B.A., Ph.D. . . . . Associate Professor of Marketing
B.S., Arkansas State College; M.B.A., Ph.D., University of Arkansas.

JAMES LOGAN STITH, A.B., M.D. . . . . Associate Professor of Medical Technology
A.B., M.D., George Washington University.

LEONARD DON STOCKER, A.B., M.A., Ph.D. . . . . Associate Professor of Music
A.B., University of Michigan; M.A., Columbia University; Ph.D., Florida State University.

PETER KONRAD STOCKS, B.S., M.S., Ph.D. . . . . Chairman of Department of Microbiology and Professor of Microbiology
B.S., Millsaps College; M.S., University of Southern Mississippi; Ph.D., Louisiana State University.

GARY ALLEN STRINGER, B.A., M.A., Ph.D. . . . . Assistant Professor of English
B.A., M.A., Ph.D., University of Oklahoma.

WARREN CLAYTON SULLIVAN, B.A., B.D., Th.D. . . . . Associate Professor of Anthropology, Philosophy, and Religion
B.A., Mississippi College; B.D., Th.D., Southern Baptist Theological Seminary.

DANIEL ALVIN SUNDEEN, B.A., A.M., Ph.D. . . . . Assistant Professor of Geology
B.A., University of New Hampshire; A.M., Ph.D., Indiana University.

C DOWNING SWEAT, JR., B.M.E., M.S. . . . . Assistant Professor of Management
B.M.E., Auburn University; M.S., Florida State University; doctoral study, University of Alabama.

JAMES REGINALD SWITZER, B.S., M.S., Ed.D . . . . . Professor of Health
B.S., University of Southern Mississippi; M.S., Louisiana State University; Ed.D., University of Texas.

RAYMOND TATALOVICH, B.A., M.A., Ph.D. . . . . Assistant Professor of Political Science
B.A., Ohio University; M.A., Ph.D., University of Chicago.

GLORIA BRUEMMER TAYLOR, B.S., M.S., Ed.D. . . . . Assistant Professor of Business Education
B.S., M.S., Ed.D., University of Southern Mississippi.

WILLIS TERRY, B.S., M.A. . . . . Part-time Instructor of Recreation
B.S., M.A., University of Southern Mississippi.

SHELBY FRELAND THAMES, B.S., M.S., Ph.D. . . . . Dean of College of Science and Professor of Polymer Science
B.S., M.S., University of Southern Mississippi; Ph.D., University of Tennessee.

JAC LYNDON THARPE, B.A., M.A., Ph.D. . . . . Professor of English
B.A., M.A., University of Tennessee; Ph.D., Harvard University.

ROBERT CHARLES THOMAS, B.A., M.A., Ph.D. . . . . Assistant Professor of Speech and Hearing Sciences
B.A., Texas Christian University; M.A., Ph.D., University of Southern Mississippi.

ROBERT PAYNE THOMAS, B.S., M.S., Ph.D. . . . . Instructor of Research and Human Development
B.S., Oklahoma State University; M.S., Southern Illinois University; Ph.D., University of Southern Mississippi.

JOHN RICHARD THOMPSON, B.A., M.A., Ph.D. . . . . Associate Professor of Biology
B.A., Albion College; M.A., Ph.D., Duke University.

RONALD WAYNE THORNTON, A.B., A.M. . . . . Assistant Professor of Foreign Languages
A.B., Louisiana State University; A.M., Indiana University.

JOE BARHAM THRASH, JR., B.S., M.S., Ph.D. . . . . Assistant Professor of Mathematics
B.S., M.S., Lamar State College; Ph.D., Texas Technological College.

PAUL MARVIN TOOM, B.A., Ph.D. . . . . Assistant Professor of Chemistry
B.A., Central College (Iowa); Ph.D., Colorado State University.

PAUL DELMAS TORRES, B.S.C., M.B.A., Ph.D. . . . . Associate Professor of Accounting
B.S.C., Spring Hill College; M.B.A., Ph.D., University of Alabama.

JAMES AIRD TOWNLEY, B.S., M.A. . . . . Assistant Professor of Physical Education
B.S., M.A., University of Southern Mississippi; doctoral study, Louisiana State University.

JACK LEONARD TRABONT, B.S., M.S., Ph.D. . . . . Associate Professor of Special Education
B.S., M.S., Ph.D., University of Oregon.

WARREN FRANCIS TRACY, A.B., B.S. in L.S., M.A., Ph.D. . . . . Librarian and Professor of Library Science
A.B., Earlham College; B.S. in L.S., Western Reserve University; M.A., Ph.D., University of Chicago.

[5] GUY THOMAS TRAIL, A.B., A.M., Ph.D. . . . . Assistant Professor of Foreign Languages
A.B., A.M., Ph.D., University of Illinois.

WILLIAM TUCHAK, LL.M., I.A.M., Ph.D. . . . . Professor of Political Science
LL.M., Cashmir University; I.A.M., Columbia University; Ph.D., University of Colorado.

FORREST DALE TUCKER, B.A., M.A., Ph.D. . . . . Professor of Communication
B.A., University of Wichita; M.A., Ph.D., Cornell University.

ROBERT JOSEPH TULLEY, B.M.Ed., M.A.Ed., Ed.D. . . . . Associate Professor of Music Education
B.M.Ed., M.A.Ed., Murray State University; Ed.D., University of Illinois.

FERN TUTEN, B.S., M.S., Ph.D. . . . . Assistant Professor of Art
B.S, Columbia College; M.S., University of North Carolina at Greensboro; Ph.D., Florida State University.

SIDNEY D. UPHAM, A.B., Ph.D. . . . . .Professor of Chemistry and Director of The Universities' Marine Center
A.B., Clark University; Ph.D., Oklahoma State University.

ROBERT THOMAS van ALLER, B.S., M.S., Ph.D. . . . . Dean of the Graduate School and Professor of Chemistry
B.S., M.S., Ph.D., University of Alabama.

RICHARD CRAWFORD VREELAND, B.A., M.B.A., Ph.D. . . . .Chairman of Department of Marketing and Professor of Marketing
B.A., Rollins College; M.B.A., Ph.D., University of Florida.

STANLEY WALDOFF, B.S., M.S., Ed.D. . . . . Assistant Professor of Music
B.S., M.S., Juilliard School of Music; Ed.D., Columbia University.

ROBERT WARE WALES, B.S., M.S., Ph.D. . . . . Assistant Professor of Geography
B.S., M.S., Oregon State University; Ph.D., University of Kansas.

JAMES FREDERICK WALKER, A.B., M.S., Ph.D. . . . . Distinguished University Professor of Biology
A.B., M.S., University of Mississippi; Ph.D., University of Iowa.

[3] JESSIE STEWARD WALL, A.B., A.M., Ed.D. . . . . .Professor of Curriculum and Instruction
A.B., Fairmont State College; A.M., West Texas State College; Ed.D., Florida State University.

HARRY CALVIN WARD, JR., B.A., M.A. . . . . Assistant Professor of Art
B.A., University of Southern Mississippi; M.A., East Tennessee State University.

SIDNEY EDWARD LEE WEATHERFORD, JR., B.S., M.A., Ed.D. . . . . Director of the Bureau of Institutional Research and Professor of Educational Administration and Supervision
B.S., M.A., University of Southern Mississippi; Ed.D., University of Florida.

GORDON ALLISON WEAVER, B.A., M.A., Ph.D. . . . . .Associate Professor of English
B.A., University of Wisconsin; M.A., University of Illinois; Ph.D., University of Denver.

SARAH LITTLETON WEAVER, B.S., M.A., Ph.D. . . . . Dean of the School of Home Economics and Professor of Food and Nutrition
B.S., M.A., University of Southern Mississippi; Ph.D., Florida State University.

CHARLES FIRMIN WEBB, B.S., M.A. . . . . .Director of Driver Training Program and Assistant Professor of Health
B.S., M.A., University of Southern Mississippi; doctoral study, University of Georgia.

PORTER GRIGSBY WEBSTER, B.A., M.S., Ph.D. . . . . .Professor of Mathematics
B.A., Georgetown College; M.S., Ph.D., Auburn University.

LATNEY CONRAD WELKER, JR., B.S., M.A., Ed.D. . Chairman of Department of Research and Human Development and Professor of Research and Human Development
B.S., Millsaps College; M.A., Ed.D., University of Southern Mississippi.

DAVID LEE WERTZ, B.S., M.S., Ph.D. . . . . .Associate Professor of Chemistry
B.S., Arkansas State University; M.S., Ph.D., University of Arkansas.

BEN MARSHALL WEST, B.S., M.S., J.D. . . . . Associate Professor of Finance and Staff Counselor
B.S., United States Military Academy; M.S., University of Colorado; J.D., University of Mississippi.

FRANK COOK WHITESELL, B.S., M.A., Ph.D. . . . . Assistant Professor of Economics
B.A., M.A., University of South Carolina; Ph.D., Tulane University.

LEON AUSTIN WILBER, A.B., M.A., Ph.D. . . . . Distinguished University Professor of Political Science
A.B., M.A., Ph.D., University of Michigan.

GARY CECIL WILDMAN, A.B., Ph.D. . . . . Chairman of Department of Polymer Science and Associate Professor of Polymer Science
A.B., Thiel College; Ph.D., Duke University.

D. C. WILLIAMS, JR., B.S., M.S., Ph.D. . . . . Director of Bureau of Business Research and Associate Professor of Economics
B.S., Southeastern Louisiana College; M.S., Ph.D., Louisiana State University.

HOWARD PERSON WILLIAMS, A.B., M.S., Ph.D. . . . . .Associate Professor of Chemistry
A.B., East Carolina University; M.S., Ph.D., University of Florida.

JACK COOK WIMBERLY, B.A., M.A., Ph.D. . . . . Chairman of Department of Economics and Professor of Economics
B.A., Louisiana Polytechnic Institute; M.A., Ph.D., Louisiana State University.

ROGER KOHLER WINGER, B.S., M.A., Ph.D. . . . . Associate Professor of Speech and Hearing Sciences
B.S., Ashland College; M.A., Ph.D., The Ohio State University.

FORREST EDWARDS WOOD, JR., B.A., Th.D. . . . . Associate Professor of Anthropology, Philosophy, and Religion
B.A., Baylor University; Th.D., Southwestern Baptist Theological Seminary.

JOHN HERBERT WOOD, B.S., M.S., Ph.D. . . . . Assistant Professor of Physics and Astronomy
B.S., M.S., Ph.D., Virginia Polytechnic Institute.

SANFORD WATTS WOOD, B.A., Ph.D. . . . . Associate Professor of Anthrolopology, Philosophy, and Religion
B.A., Louisiana College; Ph.D., Vanderbilt University.

VIVIAN POATES WOOD, B.Mus., M.Mus. . . . . Assistant Professor of Music
B.Mus., Harte College of Music; M.Mus., Washington University; doctoral study, Yale University Graduate School of Music and Art.

KAREN MARGUERITE YARBROUGH, B.S., M.S., Ph.D. . . . . Associate Professor of Microbiology
B.S., M.S., Mississippi State University; Ph.D., North Carolina State University.

THOMAS DONALD YARNELL, B.A., M.A., Ph.D. . . . . Assistant Professor of Psychology
B.A., Fairleigh Dickinson University; M.A., Ph.D., Louisiana State University.

WALTER HARRY YARROW, B.S., M.A., Ed.D. . . . . Professor of Health
B.S., M.A., Ed.D., University of Southern Mississippi.

JAMES FRANCIS YESTADT, B.S., M.A. . . . . Assistant Professor of Music and Coordinator of Allied Arts
B.S., Lebanon Valley College; M.A., Columbia University.

---

1. Leave of Absence, 1972-9173.
2. Resigned November, 1972.
3. Retired December, 1972.
4. Effective January 1, 1973.
5. Deceased March 18, 1973.

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NOTES

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USM

University
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